United States Department of Agriculture
Science and Education Administration
Agricultural Research Northeastern Region Beltsville Agricultural Research Center
Beltsville Maryland 20705

NOTES FROM THE DIRECTOR

No. 120 January 12, 1981

DEATH OF BARC SCIENTIST

Sterling B. Hendricks, 78, internationally known emeritus USDA scientist died Sunday, January 4, 1981, while visiting his daughter and grandchildren in Novato, California. He died of complications from a respiratory infection.

Sterling Hendricks was born in Elysian Fields, Texas, April 13, 1902. He was awarded a B.Ch.E. degree from the University of Arkansas in 1922, majoring in chemistry and mathematics; pursued graduate work in chemistry and geology at the University of Iowa in 1923; received his M.S. degree in chemistry from Kansas State Agricultural College in 1924; and his Ph. D. from the California Institute of Technology in 1926, with a major in chemistry and minors in mathematical physics and physics.

He worked for the Geophysical Laboratory, Carnegie Institution, Washington, DC, 1926-27; and for the Rockefeller Institute of Medical Research, New York City, 1927-28. He began his research with the U.S. Department of Agriculture in 1928. He started as an associate chemist with the Fixed Nitrogen Research Laboratory. From August 1957 until July 1970 he was chief scientist, Mineral Nutrition Pioneering Research Laboratory, at Beltsville. From his retirement in 1970 until his death he continued his career as a collaborating scientist in Agricultural Research in the Agricultural Environmental Quality Institute (AEQI), at BARC.

Dr. Hendricks' scientific contributions have encompassed a wide range of interests and abilities. He served variously as chemist, physicist, mathematician, plant physiologist, geologist, and mineralogist. His unique talent was the exceptional ability to apply basic sciences to agricultural problems, and to interpret phenomena across discipline lines.

Dr. Hendricks made numerous outstanding research contributions in diverse fields, reported in over 200 technical publications. His scientific work has included the physical-chemical aspects of the structure of solids, hydrogen bond formation, the structural properties of clays; the synthesis of waxes and rubber in plants, the nature of bone, the mechanism of salt uptake by plants; and photoperiodism and the control of plant growth by light.

Dr. Hendricks and his associates at Beltsville discovered and isolated phytochrome, the protein molecule that regulates many plant processes. More recently, his research in the Weed Science Laboratory, AEQI, has dealt with the interaction of phytochrome and plant membranes.

Dr. Hendricks has received many awards and other forms of recognition. He was awarded the following honorary degrees: LL.D., University of Arkansas, 1946; D. Sc., University of North Carolina, 1962; and D. Sc., Kansas State

University, 1963. He received the Hillebrand Prize (Chemistry) in 1937; the Science Award, Washington Academy of Sciences in 1942; the Day Medal (Geology) in 1952; the USDA Distinguished Service Award in 1952; from President Eisenhower, the First Presidential Award for Distinguished Civilian Service in 1958; the Rockefeller Public Service Award in 1960; the Hoblitzelle Award in Agricultural Sciences in 1962; the Stephen Hales Award (Plant Physiology) in 1962; the Certificate of Merit for Application of Basic Science to Agriculture (Botany) in 1964; the Distinguished Alumna Award of the California Institute of Technology in 1968; the Cecil Reid Barnes Honorary Life Membership, American Society of Plant Physiology in 1969; from President Ford, the National Medal of Sciences in 1976; and the Finsen Award of the International Society of Photo Biology in Rome, Italy, in 1976.

Dr. Hendricks was an active member of a number of professional societies. He was a member of the American Chemical Society and Geological Society of America. He was elected Fellow of the American Physics Society in 1938, of the Mineralogical Society in 1940, of the American Society of Agronomy in 1945. He served as President of the Mineralogical Society as well as of the American Society of Plant Physiology. He was a member of the National Academy of Sciences since 1952, being designated as Chairman of the Section on Botany and a Member of the Council in 1962, and as Member, Life Sciences Panel in 1966. He represented the Academy as Special Guest Lecturer at the Centennial Celebration of the Royal Society of New Zealand in 1967. He was elected to the America Philosophical Society in 1967. Since 1974, he was an active member of the Committee on Research and Exploration of the National Geographic Society.

Exploring the unknown was a hobby as well as a profession with Sterling Hendricks. He was an expert mountain climber and a member of the Alpine Clubs of the United States and Canada. In his research he applied the same spirit of teamwork that was so essential in climbing mountains. He was never too busy to be helpful. His outlook as a scientist was that of a man on the heights viewing the broad landscape of learning and the horizons beyond. Though he received many honors for his scientific leadership, he remained a humble man, a sympathetic colleague, and a devoted public servant.

YOUNG ADULT CONSERVATION CORPS (YACC)

This month, the YACC Program takes pride in featuring ELIZABETH COMPTON, a 20-year-old YACC enrollee assigned to the Mycology Laboratory, PPI. Elizabeth prepared one of the Laboratory's most outstanding exhibits entitled "Mummy Berry Disease of Blueberries." Likh R. Batra provided her with a draft he recently prepared. Elizabeth's contributions to the exhibit consisted of selecting, matting or dry-mounting photographs, and determining the appropriate magnifications. She ascertained suitability of the display area, lighting, and final display. Elizabeth sketched all the drawings, as well as wrote the entire popular text and the legends that accompany the exhibit.

Thanks to YACC enrollee Elizabeth Compton, the Mummy Berry Disease of Blueberries Exhibit, located in the lobby of Building 011A, PPI, has attracted a lot of attention and has received numerous praiseworthy remarks.

PERSONNEL

Carl E. Sams, Research Plant Physiologist, joined the Horticultural Crops Quality Laboratory, HSI, in September. Dr. Sams received his B.S. and M.S. degrees at the University of Tennessee, and a Ph. D. in horticulture at Michigan State University in 1980. His research will concern postharvest physiology of deciduous fruits and berries including storage, ripening, senescence, physiological disorders, and use of hormones or other chemicals to retard deterioration.

James J. Marois, Research Plant Pathologist, joined the Soilborne Diseases Laboratory, PPI, in September. He received his B.A. degree from Florida Atlantic University, Boca Raton, and his Ph. D. degree at the University of Florida, Gainesville. His research will focus on the biological and integrated control of soilborne plant pathogens.

Ayoub S. Zaza, Plant Pathologist, Ministry of Agriculture, Syria, is spending 6 months at the Soilborne Diseases Laboratory, PPI. Mr. Zaza will work with George C. Papavizas, Chief, Soilborne Diseases Laboratory, and Thomas H. Barksdale, Vegetable Laboratory, HSI, on tomato wilt caused by Fusarium.

EMPLOYEE ACTIVITIES

Alley E. Watada, Horticultural Crops Quality Laboratory, HSI, has accepted an appointment as a member of the Committee on Plant Products, Commission on Sociotechnical Systems, National Research Council, Washington, DC, for a term of 3 years. This committee reviews and evaluates Plant Products Research Programs under the jurisdiction of the Advisory Board on Military Personnel Supplies.

Charles S. Helling, Pesticide Degradation Laboratory, AEQI, served as a lecturer at the UN-sponsored "Interregional Training Course on Nuclear Techniques for Chemical Residue and Pollution Problems." The course--held in Cairo, Egypt, in November--is offered to scientists from developing countries at 3-4 year intervals. He later consulted with scientists at Bet Dagan and Rehovot, Israel.

At the Joint Meeting of the Phytochemical Society of North America and the American Society of Plant Physiologists, Pullman, Washington, on August 3-7, James A. Saunders, Tobacco Laboratory, PGGI, was elected secretary of the Phytochemical Society. Among other duties, he will edit the Society's bimonthly newsletter which publishes items of interest to phytochemists.

During the period September 25 to October 8, Richard H. Miller, Chief, Milk Secretion and Mastitis Laboratory, ASI, traveled to Poland to review Special Foreign Currency (SFC) research, and to attend an International Symposium. He reviewed an SFC cattle project at the University of Krakow funded by the joint USDA-Marie Curie-Sklodowska program. Also, he gave a seminar to faculty and students at the university on genetic relationships of milk yield and mastitis resistance in dairy cattle. In Warsaw, Dr. Miller presented a paper at the "International Conference on Resistance Factors and Genetic Aspects of Mastitis Control," and chaired one of the sessions of the conference.

Donald T. Krizek, Plant Stress Laboratory, PPHI, and Chairman, American Society for Horticultural Science (ASHS) Working Group on Developmental and Stress Physiology, Water Stress Subgroup, recently organized and chaired an ASHS Workshop entitled "Adaptation to Water Stress in Plants" at Colorado State University on July 30. The proceedings of the Workshop will be published in HortScience in February 1981. Copies of the proceedings may be obtained by sending a self-addressed mailing label to the Plant Stress Laboratory, Room 206, Bldg. 001, BARC-West, Beltsville, Maryland 20705.

George C. Papavizas, Chief, Soilborne Diseases Laboratory, PPI, attended the Fifth Congress of the Mediterranean Phytopathological Union held September 21-27, 1980, at the University of Patras, Greece. About 300 Plant Pathologists from 17 European, Asiatic, and African countries attended the Congress. Dr. Papavizas presented an invited paper on "Recent Advances in the Biological Control of Soilborne Plant Pathogens."

Burton Y. Endo, Chairman, Plant Protection Institute, attended the XVth International Symposium of the European Society of Nematologists held in Bari, Italy, August 24-30. Dr. Endo was chairman of the plenary session on morphology and presented a paper entitled "Ultrastructure of the Neurosensory Organs in the Anterior Region of Larvae of the Soybean Cyst Nematode, Heterodera glycines." He was also a panel member in a discussion on nematode behavior and host responses. Following the Bari meetings, he visited Dr. John Drea at the USDA European Parasite Laboratory, and Dr. Michel Luc of the Nematology Laboratory, Natural History Museum in Paris, France. He later visited Dr. Andre De Grisse and colleagues at the Rijkuniversiteit-Gent, Gent, Belgium, and participated in a seminar on the biology, control, and ultrastructure of the soybean cyst nematode.

Ronald Fayer, Chief, Ruminant Parasitic Diseases Laboratory, API, was invited as a consultant by the Meat and Poultry Inspection Division of FSQS to attend the U.S. Animal Health Association Meeting in Louisville, Kentucky. He presented an overview on the transmission and public health aspects of Sarcocystis in food animals.

Kenneth L. Kuttler, Chief, Hemoparasitic Diseases Laboratory, API, recently spent 1 week in Venezuela, on behalf of OICD, in which several veterinary research facilities and Government officials were visited for the purpose of establishing cooperative research in the area of hemoparasitic diseases. These diseases are of utmost importance there and are recognized as contributing to severe livestock losses especially in imported animals. Dr. Kuttler joined Drs. M. Ristic and R. Smith, University of Illinois, in talks with veterinarians associated with the veterinary school at Barquisimeto, and the government research laboratories at Maracay. Preliminary agreements were concluded to proceed with cooperative research and training involving the Universidad de la Region Centrooccidental (Barquisimeto); Centro Nacional de Investigaciones, Agropecnarias (CENIAP-FONAIAP) (Maracay); the University of Illinois; and the USDA. Such cooperative studies, funded largely from Venezuelan sources, will contribute to the scope and depth of similar studies at API-BARC.

K. Darwin Murrell, Chief, Non-Ruminant Parasitic Diseases Laboratory, API, gave an invited lecture at the Shearing Corporation Animal Health Research Center (AHRC), Allentown, New Jersey, on October 30, entitled "Frontiers in Immunoparasitology." Dr. Murrell was accompanied by Dr. Shou-Tai Hsu, a visiting scientist from the Animal Schistosomiasis Laboratory, Shanghai, People's Republic of China. Dr. Hsu consulted with investigators at the AHRC regarding new approaches to chemotherapy of livestock parasitic diseases.

On November 10 and 11, Dr. Murrell chaired the session on "Immunoparasitology" at the 26th Annual Conference of Research Workers in Animal Diseases, held in Chicago. He also presented a paper entitled "Inhibition of Strongyloides ransomi larvae in immune pigs."

David Stiller, Research Entomologist with the Hemoparasitic Diseases Laboratory, API, visited the Plum Island Animal Disease Center, Greenport, New York, on November 12. He was invited to present a seminar on tick transmission of livestock hemoparasites and to design a tick containment unit. Plum Island scientists hope to investigate the vector competence of various indigenous argasid ticks for African swine fever virus.

Martin Jacobson, Chief, and Victor E. Adler, Biologically Active Natural Products Laboratory, AEQI, attended the national meeting of the Entomological Society of America in Atlanta, Georgia, November 30 to December 4. Mr. Jacobson chaired a Symposium on "Current Research on Feeding Deterrents" which he had organized for the Section on Physiology, Biochemistry and Toxicology.

Martin Jacobson, Chief, Biologically Active Natural Products Laboratory, AEQI, attended work conferences with personnel of the USDA Tropical Fruit and Vegetable Research Laboratory in Honolulu, Hawaii, in November. Discussions were held on progress and future plans of joint research on survey and control of the Mediterranean fruit fly, melon fly, and oriental fruit fly.

Victor Adler, Biologically Active Natural Products Laboratory, AEQI, attended the 10th International Chemoreception Workshop on Insects which was held in October at Port Deposit, Maryland. He presented a resume of his electrophysiological research on pest insect species.

At the request of APHIS, Martin Jacobson, Chief, Biologically Active Natural Products Laboratory, AEQI, spent 5 days in Montemorelos, Linares, Los Altares, and Monterrey, Mexico, to initiate a joint APHIS-SEA research program aimed at discovering and developing attractants for the Mexican fruit fly, a serious pest of citrus in Mexico, which also invades the fertile citrus areas of the Rio Grande Valley of Texas. Biological aspects of the program will be conducted at the APHIS facilities in Monterrey and the chemical aspects will be conducted at Beltsville.

Philip A. Madden, Poultry Parasitic Diseases Laboratory, API, and Kenneth L. Kuttler, Chief, Hemoparasitic Diseases Laboratory, API, presented papers at the U.S. Animal Health Association meeting held in Louisville, Kentucky, in November. Mr. Madden's paper was entitled "Factors Affecting the Rapid Card Agglutination Test for Anaplasmosis," and Dr. Kuttler's paper was entitled "Chemotherapy to Eliminate Anaplasma marginale Under Field and Laboratory

Conditions." They also attended and contributed to the anaplasmosis committee meetings which covered in some depth research and regulatory progress associated with anaplasmosis in the U.S.

HONORS AND AWARDS

Cash Awards:

Ball, Kevin, J., Utilities and Services Branch, Division of Operations.
Bare, Charles E., Weed Science Laboratory, AEQI.
Carson, Donald E., Milk Secretion and Mastitis Laboratory, ASI.
Dorsey, Gilbert L., Plant Hormone and Regulators Laboratory, PPHI.

Quality Increases:

Bass, Charles E., Cell Culture and Nitrogen Fixation Laboratory, PPHI.
Davis, Betty J., Nonruminant Animal Nutrition Laboratory, ASI.
Dulin, Anne M., Milk Secretion and Mastitis Laboratory, ASI.
Neuenhan, Linda M., Reproduction Laboratory, ASI.
Ochs, Sharon A., Nematology Laboratory, PPI.
Paolini, Paula A., Biological Waste Management and Organic Resources Laboratory, AEQI.
Spaulding, David W., Plant Hormone and Regulators Laboratory, PPHI.
Tousignant, Marie E., Plant Virology Laboratory, PPI.

COOPERATIVE RESEARCH

Potato Variety BELRUS

BELRUS was developed at the Beltsville Agricultural Research Center and released in 1978. Its pest resistance, preliminary adaptation, and culinary qualities were established at BARC and in cooperation with the North Atlantic Area at Presque Isle, Maine, and in cooperation with experiment stations in Maine, New Jersey, Virginia, Florida, and Wisconsin. Adaptation to commercial production of BELRUS was done in cooperation with growers in the above States. Storage potential and commercial-scale consumer acceptance research on BELRUS was done in cooperation with Houghton Farms, Inc., Fort Fairfield, Maine; R. T. French Company (now Johnson Products), Washburn, Maine; Safeway Stores (Northeastern U.S.); and Stark Farms, Inc., Rhinelander, Wisconsin.

BELRUS is the first long russet variety adapted to the diverse growing environments of the Eastern U.S. It offers Eastern growers an alternative to the production and marketing of only the round white tuber type potato varieties for the fresh market and processing. BELRUS is primarily a baking potato but is especially suited to processing into long, high quality frozen french fries, 80 percent of which are currently produced in the Pacific Northwest. Its greatest current impact has been to furnish Maine with a russet variety which can be washed, graded into uniform sizes, and attractively packaged for merchandizing BELRUS successfully in competition with California spring-and-summer-grown russets.

BELRUS is a medium maturing (110 days), long russetted tuber type variety. It is relatively high in solids content and ascorbic acid, especially noted for its mealy, flavorful baking quality, and processing into french fries. It is resistant to three major viruses and four soilborne diseases.

BELRUS is an excellent example of an end product of cooperative Federal, State, and industry research.

William P. Wergin, Nematology Laboratory, PPI, Burton Y. Endo, Chairman, PPI, and Dr. D. Orion, Volcani Center, Israel, recently received approval of a 3-year grant from the Binational Agricultural Research Development Fund (BARD). The proposed research entitled "Studies of plant root-knot nematode (Meloidogyne incognita and M. javanica) interrelationships," will determine the effects of mineral nutrients, growth regulators, and environmental conditions on the formation of feeding sites in the root and on the development and maturation of the nematode. This information will increase our basic understanding of host-parasite interactions and may lead to new or novel approaches to reduce crop losses.

Choi Chee Wong, of the Malaysian Agricultural Research and Development Institute, Serdang, Selangor, visited BARC on November 4-7 as part of a short-term Fellowship. His primary contact at Beltsville was George A. White, Germplasm Resources Laboratory (GRL), PGGI, concerning the introduction, documentation, distribution, and exchange of crop germplasm with emphasis on forage species. He also spent time with Albert J. Oakes, David H. Smith, and Wayne M. Porter, GRL, and James H. Elgin, Roger H. Ratcliffe, and Thomas C. Elden, Field Crops Laboratory, PGGI. Mr. Wong's broad interests also included plant physiology and stress, nitrogen fixation, light and plant growth, plant quarantine; animal nutrition; and energy conservation. A tight time schedule proved adequate for only brief visits with scientists in each of these research areas, and for a tour of the Center.

VISITORS

Dr. W. F. Raymond and Mr. Richard Harris from the British Ministry of Agriculture, Fisheries, and Food visited BARC on December 19. The visitors discussed animal science with Drs. L. W. Smith, P. W. Moe, and D. E. Waldo, ASI, and animal parasitology problems with Drs. H. Herlich, K. D. Murrell, and M. D. Ruff, API. Mr. Myers, Technical Information Service, gave a review of CRIS and methods by which the Ministry might cooperate with the U.S. system. The various European systems were also discussed.

Dr. Raymond is Deputy Chief Scientist at the Ministry, and Mr. Harris is on the Agricultural Research Council. They visited Beltsville following 2 days spent with Dr. Kinney and his staff. --Visitor Unit

Members of the Industrial Research Institute visited BARC in October. Current Institute membership represents companies with sales of $50 million to $60 million and R&D expenditures from around $1 million to over $1.5 billion. Industrial Research Institute members employ nearly a quarter of a million scientists and engineers in R&D activities. --Visitor Unit

Egypt--Dr. Y. Awad and Dr. A. Shabaitah from the Veterinary Research Institute, Cairo, visited the Meat Science Research Laboratory, ASI, in October to discuss plans for the recently initiated PL-480 research project "Detecting meat from 5D (dead, dying, diseased, drugged, disabled) slaughter animals."

France--In October, MM. Bernard Bonaiti and Jean-Claude Mocquot of the Station de Genetique quantitative, Jouy-en-Josas, France, visited the Animal Improvement Programs Laboratory, ASI, to consult with laboratory scientists on techniques used for the processing of dairy records and genetic evaluation of dairy cattle in the U.S. MM. Bonaiti and Mocquot are in charge of the computer processing of all dairy recordkeeping information in France, including information furnished periodically to dairymen for herd management as well as the national genetic evaluations. During their trip to the U.S. they also visited the Department of Animal Science, Cornell University, and the Holstein Association in Vermont.

Guinea--The Prime Minister of Guinea, Dr. Lansana Beavoqui, was greeted by Paul A. Putnam, BARC Director, and given a tour of the Center by Gordon Carpenter of the Visitor Unit on November 7.

Hungary--Agricultural Councilor Dr. Jozsef Nemeth, Hungarian Embassy, was given an overview of BARC on November 7 by John F. Fleming of the Visitor Unit.

India--Dr. H. P. Tipnis, Bombay College of Pharmacy, visited with members of the Biologically Active Natural Products Laboratory, AEQI, and presented a seminar on "Pesticides from Indian Plants."

Israel--Professor Erwin Glotter, Department of Chemistry, Hebrew University, Rehovot, visted with members of the Biologically Active Natural Products Laboratory, AEQI, to discuss collaborative research programs.

Japan--Dr. Yasuhara Mamiya, Forestry and Forest Products Research Institute, Ibaraki, visited with W. R. Nickle and other members of the Nematology Laboratory, PPI, from November 19 to 21. He presented a talk at the Plant Pathology Seminar on the Pine Wood Nematode in Japan. Japan spent approximately $35 million this past year on control of this devastating nematode. The nematode is found in this country in some of our ornamental pine trees and we are monitoring its spread.

People's Republic of China (PRC)--Two important delegations from PRC discussed problems with BARC scientists on November 20. The first group was led by Dr. HE Kang, Vice Chairman of the State Agricultural Commission. In addition to a greeting by P. A. Putnam, he was briefed by John G. Moseman, PGGI, Dean Gamble, NAL, Frank Douvres, API, and Miklos Faust and Karl Norris, HSI. The second delegation was headed by Dr. TAO Dinglai, Chinese Academy of Agricultural Engineering. They were greeted by Jerrel B. Powell, Assistant Director, BARC, and visited with Jerry Chatterton, PPHI, A. Abdul-Baki, PGGI, George Willson, AEQI, Henry Retzer, PPHI, Ralph Nave, SEA Special Programs, and Karl Norris, HSI.

People's Republic of China (PRC)--A delegation from PRC visited BARC on November 6. Following a greeting by Dr. Putnam, they visited with John G. Moseman, Chairman, Plant Genetics and Germplasm Institute; Meryl N. Christiansen, Chairman, Plant Physiology Institute (including Perry B. Cregan, Thomas E. Devine, and Deane F. Weber from the Cell Culture and Nitrogen Fixation Laboratory). Following lunch they met with E. Ted Engman, Chief, Hydrology Laboratory.

Poland--Dr. E. Prost of the Institute of Hygiene of Animal Products, Lublin, visited the Meat Science Research Laboratory, ASI, in August to discuss research progress under the PL-480 project "Composition, palatability and nutritive value of pork in relation to age and sex of pigs," and to discuss plans for initiating additional cooperative research.

South Africa--Dr. G. Klingbiel from the Meat Board in Pretoria, South Africa, and Mr. M. D. Strauss from the Embassy of South Africa, Washington, DC, visited the Meat Science Research Laboratory, ASI, in August, to discuss and receive information on all phases of meat research.

South Africa--Mr. F. W. Lehmann of the Department of Agriculture and Fisheries, Pretoria, visited the Meat Science Research Laboratory, ASI, to discuss information regarding all phases of meat quality control, with particular emphasis on detecting species of origin.

South Africa--Dr. G. Niemand of the Atomic Energy Board of South Africa visited the Meat Science Research Laboratory, ASI, to discuss irradiation of meat.

Sweden--Dr. L. Jarenback of Nordreco, AB, Sweden, visited the Meat Science Research Laboratory (MSRL), ASI, to discuss the MSRL's research in electrical stimulation of carcasses.

Sweden--Dr. K. Ostlund, Dr. S. Fabiansson, and Dr. A. Laser Rantenward of the Swedish Meat Research Institute of Kavlinge, Sweden, visited the Meat Science Research Laboratory (MSRL), ASI, recently to discuss information on all phases of meat research within the MSRL with particular interest on stress in slaughter animals.

Virginia--A group of students from the College of William and Mary, Williamsburg, visited BARC in October. The group was interested in problems dealing with food and energy.

VISITOR UNIT QUARTERLY TABULATION:

During the quarter ending December 31, 1980, the Visitor Unit reports the following information:

No. of Visitors	High Level/Professional Groups/Individuals	Students	Other	Countries Represented
3,455	678	1,561	1,216	41

SURPLUS EQUIPMENT

Item	Condition	Contact	Ext.
Canopy, Stainless Steel	New	Jack A. Lewis	43056

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

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NOTES FROM THE DIRECTOR

No. 121 February 23, 1981

Sometimes it seems as if bad news travels over the grapevine faster than good news so I thought you might be interested in some of the good news (worth close to $2.5 million) for BARC in FY 81.

I - Repair and maintenance funds being utilized to bring BARC facilities into conformance with current standards and program needs include the following projects: (1 Year)

1. Install fire alarm systems (15 Buildings)
2. Install automatic sprinkler systems (002, 006)
3. Install fire escapes (263, 265)
4. Enclose open stairwells (001, 005)
5. Repair and upgrade granary (Partial)
6. Repair and replace steam lines (Range 1 & 2; Central Heating Plant)
7. Correct east side electrical substation

II - Energy retrofit funds were allocated for an energy audit of BARC (the whole Center) and for installation of a limited number of greenhouse curtains. (1 Year)

III - Increased operating cost funds were distributed in varying amounts to 28 (about one-half) of the BARC laboratories and units. (Base Funds)

IV - Line item increases were granted to 12 of the BARC laboratories--the most significant amounts for basic research on plant protection. (Base Funds)

V - Special research program releases benefited the following numbers of laboratories: (1 Year)

1. IPM - 3 laboratories
2. Minor use pesticides - 7 laboratories
3. Gypsy moth - 4 laboratories
4. Pilot test - 3 laboratories
5. Tropical - 1 laboratory
6. Narcotics - 1 laboratory
7. Germplasm - 2 laboratories

Admittedly, these funds do not approach the losses due to inflation but they do help to offset the losses related to the employee reductions and the anticipated absorption of the Pay Act. We hope to cover the employee reduction decrease with salary lapse funds. The laboratories will be expected to cover the Pay Act needs.

Those programs that did not receive some new funding and are truly in need must work with this office and their NPS representatives to see how their research programs can be strengthened.

I was also pleased recently to see letters from BARC research scientists complimenting the dedication and service of Karen Brownell, Lorraine Thaden, and Rich Hastings of the Personnel Branch, and Preston Enzian of the Farm Management Branch. Similarly impressive was the willingness of James W. Downs and James A. Snyder, Animal Operations Unit, who accepted temporary assignments within the Unit to prevent a crisis due to the personnel freeze. It is the support and example of dedicated employees such as these that makes BARC such a fine place to work.

YOUNG ADULT CONSERVATION CORPS (YACC)

This month the YACC is honoring enrollees who have been outstanding in their work performance. These enrollees have been commended by the YACC Camp Director, as well as their supervisors, for their display of hard work, dedication, and interest in performing assigned duties. The enrollees listed below have proven to be valuable employees to both BARC and the YACC Program:

Monica Brooks	Michael Goodchild	Dennis McMullin
Marilyn Christian	Charles Huddle	Eric Martin
Elizabeth Compton	Jeanne Johnson	Jeffre Powell
Wayne Daniels	Nancy Koles	John Rice
Jerry Ford	Marietha Lott	Drucilla Williams

NEW INSTITUTE CHAIRMAN

Allan K. Stoner has been selected as the new Chairman of the Plant Genetics and Germplasm Institute, replacing John G. Moseman who is returning to full-time "bench" research in the Field Crops Laboratory. Dr. Stoner is recognized nationally and internationally as a leader of research on tomato breeding and has served during the past 9 years in the Vegetable Laboratory, Horticultural Science Institute. He assumed his new responsibilities on January 25.

Dr. Stoner received a B.S. degree in horticulture in 1961, and an M.S. degree in plant breeding and genetics in 1963 from Purdue University. He completed his Ph. D. program at the University of Illinois in 1965 with a major in plant breeding and genetics of horticultural crops and a minor in plant pathology and genetics. He joined the USDA (BARC) in 1965 as a Research Horticulturist.

It is significant to note that Dr. Moseman served as Chairman since 1972, thus making him "Dean" of our BARC Institute Chairmen. His excellent service is appreciated and I wish him every success as he returns to full-time research. His enthusiasm and many scheduled activities accompanying his return to "bench" research confirm the original hypothesis that BARC's Institute Chairmen and Laboratory Chiefs can remain active and competetive in their research.

PERSONNEL

Akey C. F. Hung, has joined the Beneficial Insect Introduction Laboratory, IIBIII, on a 2-year appointment to enhance the laboratory's program on biosystematics of Trichogramma parasites of cotton pests. Dr. Hung was previously at the University of Guam, Mangilao.

Willard L. Goff has joined the Animal Parasitology Institute, Hemoparasitic Diseases Laboratory, with an assignment to the area of bovine and equine piroplasmosis. Dr. Goff will be replacing Wayne M. Frerichs who has accepted a 2-year assignment in Saudi Arabia. Dr. Goff recently fulfilled the requirements for a Ph. D. at the Center for Tropical Animal Health, Texas A&M University, with the completion of his thesis entitled "Antibody-Dependent Cell-Mediated Cytotoxicity in Cattle Infected with Babesia bovis (Babes, 1888): Characterization of the Protozoal Antigen, Host Immunoglobulin and Effector Cells." Dr. Goff's assignment at the Hemoparasitic Diseases Laboratory will emphasize serologic and immunologic aspects of equine and bovine babesiosis. Dr. Goff's wife, Cindy, and his two children, Angela and Christopher, ages 10 and 6 will be joining him at the end of the school year in May.

Edward T. Schmidtmann, Research Entomologist, joined the Livestock Insects Laboratory, AEQI, in December. Dr. Schmidtmann received his B.A. and M.S. degrees at Humboldt State University, Arcata, California, and his Ph. D. degree at the University of California-Davis. His research will focus on the biology, control, and economic effects of insects affecting livestock.

Dr. Shou-Tai Hsu, Director of the Shanghai Laboratory of Animal Schistosomiasis, People's Republic of China, has completed his 6-month stay as a visiting scientist at the Animal Parasitology Institute (API). Dr. Hsu has visited and worked with a wide range of API staff familiarizing himself with all of the Institute programs. He has worked most extensively with Frank W. Douvres, K. Darwin Murrell, and Joseph F. Urban in the areas of in vitro cultivation of nematodes and immunoparasitology.

Dr. A. J. Haley, Professor of Zoology, University of Maryland, has begun a sabbatical leave of 6 months at the Animal Parasitology Institute. Dr. Haley will conduct research on mermithid nematodes and will use (extensively) the facilities of the Parasite Classification and Distribution Unit and Index-Catalogue of Medical & Veterinary Zoology, as well as the National Agricultural Library.

DEATHS OF BARC SCIENTISTS

Dr. Shen Chin Chang, Research Chemist in the Insect Reproduction Laboratory, AEQI, died suddenly on January 3. Dr. Chang received his first degree in agriculture from the National Chekiang University, Hangchow, China, in 1938, and his M.S. and Ph. D. degrees in entomology from Oregon State University in 1952. He remained there as a Research Assistant for 2 years and then, until 1962, he was an Assistant Professor at the University of Illinois, Urbana. There, in association with Professor C. W. Kearns, he developed a deep interest

in chemistry and metabolic processes that led to his systematic studies of natural pyrethrins, their characterization, metabolism, and activity. In 1962, Dr. Chang joined the USDA Agricultural Research Service and remained at the Beltsville Agricultural Research Center for the following 18 years.

His most significant contributions to the biology and chemistry of pesticides was his extensive research on the metabolism and activity of compounds that interfere with reproduction in insects. He was the first to develop quantitative procedures for the determination of sterilizing activity of chemosterilants; he designed and constructed an ingenious apparatus for sterilization by fumigation; and as a member of a scientific team he was instrumental in discovering and developing new insect chemosterilants and in determining their metabolism and distribution in several insect species. His research achievements were recognized by the Department in 1979 when he received the Superior Service Award. He will be remembered as an outstanding scientist by his many associates here and abroad, and as a good friend to his colleagues at Beltsville.

Dr. George Stanford, who retired in November from the Soil Nitrogen and Environmental Chemistry Laboratory, AEQI, died in Holy Cross Hospital on January 28 of complications from polycythemia. Since 1965 he had been working at BARC on the chemistry of the nitrogen cycle in soil and the effectiveness of nitrogen fertilizers.

Dr. Stanford was born in South Dakota in 1916. He took his M.S. and Ph. D. degrees at Iowa State in 1941 and 1947. During this time he served 4 years as an Infantry Captain with the U.S. Army in Europe in World War II. He was awarded a Purple Heart, an Oak Leaf Cluster, and a Bronze Star.

He was Professor of Soils at Iowa State from 1950 to 1955 when he became Chief of the Soil and Fertilizer Research Branch of the TVA at Wilson Dam, Alabama. In 1960 he became Principal Agronomist at the Hawaiian Sugar Planters Association Research Station and Dean of the School of Tropical Agriculture of the University of Hawaii.

His major research interests were always concerned with the effectiveness and availability of fertilizers and plant nutrients. In the latter part of his career he was particularly interested in soil management and the efficiency of nitrogen usage.

HONORS AND AWARDS

Cash Awards:

Whitehead, Andrew C., Farm Management Branch, Division of Operations.

Quality Increase:

Talmud, Dorothy H., Livestock Insects Laboratory, AEQI.

Patricia C. Augustine, Poultry Parasitic Diseases Laboratory, API, received her Ph. D. degree in December 1980 from the Poultry Science Department of the University of Maryland. She has been working part-time and going to school since 1965. The research leading to the degree was conducted at the Animal Parasitology Institute and involved the study of the pathophysiology of Eimeria infection in young turkeys. Dr. Augustine will lead the API research team that is responsible for studies of coccidiosis in turkeys.

Dayton L. Klingman, Chief, Weed Science Laboratory, AEQI, received the 1981 Award of Merit of the Northeastern Weed Science Society at their annual meeting in Philadelphia on January 6. The Award was established in 1970 to recognize outstanding professional careers in the discipline of weed science and in service to the Society. Dr. Klingman becomes the second employee from BARC to receive the Award. Dr. L. L. Danielson, former Chairman of AEQI, received the Award of Merit in 1977.

EQUAL EMPLOYMENT OPPORTUNITY (EEO)

EEO Counselors:

Eveline B. Bush
USDA-SEA-AR-NER
Agricultural Environmental Quality Institute
Rm. 124, Bldg. 007, BARC-W
Beltsville, MD 20705
FTS: 8-344-3163

Cita Helkie
USDA-SEA-AR-NER
Horticultural Science Institute
Rm. 114, Bldg. 004, BARC-W
Beltsville, MD 20705
FTS: 8-344-3569

Miguel McCloud
USDA-SEA-AR-NER
Plant Physiology Institute
Rm. 6, Bldg. 001, BARC-W
Beltsville, MD 20705
FTS: 8-344-3143

James P. San Antonio
USDA-SEA-AR-NER
Horticultural Science Institute
Rm. 218, Bldg. 004, BARC-W
Beltsville, MD 20705
FTS: 8-344-3353

Dale Witlock
USDA-SEA-AR-NER
Animal Parasitology Institute
Rm. 7, Bldg. 1043, BARC-E
Beltsville, MD 20705
FTS: 8-344-2300

Alternate
Lloyd Knutson
USDA-SEA-AR-NER
Insect Identification & Beneficial Insect Introduction Institute
Rm. 1A, Bldg. 003, BARC-W
Beltsville, MD 20705
FTS: 8-344-3182

NER Hispanic Coordinator:
Judy Harrington
USDA-SEA-AR-NER
Personnel Branch, AOD
Rm. 318H, Bldg. 003, BARC-W
Beltsville, MD 20705
FTS: 8-344-2768

NER Federal Women's Program Coordinator:
Barbara Wood
USDA-SEA-AR-NER
Animal Science Institute
Rm. 21, Bldg. 263, BARC-E
Beltsville, MD 20705
FTS: 8-344-2334

EMPLOYEE ACTIVITIES

Mr. F. L. Blanc, formerly of the California Department of Agriculture, Sacramento, spent January 3-16 with Richard H. Foote, Systematic Entomology Laboratory, IIBIII. This work session was for the purpose of planning in detail the format and content of a new handbook of North American fruit flies which is being coauthored. Problems of devising proper illustrations of identification characters, refining identification keys, mapping distribution data, and determining the phraseology of text material were solved as a result of this visit. The fruit flies are among the most economically important of the Diptera, or true flies, and the handbook will make it possible for non-taxonomists not only to identify all the North American species, but will lead the users of the book to the important literature of this group of insects.

Professor Mary H. Pritchard, University of Nebraska State Museum, Lincoln, visited J. Ralph Lichtenfels, Head, Parsite Classification & Distribution Unit, API, January 29-31. They discussed plans for editing and publishing a "Guide to Parasite Collections of the World." The Guide includes descriptions of 67 collections from 25 countries. Publication is expected in 1981.

Suzanne W. T. Batra, Beneficial Insect Introduction Laboratory, IIBIII, organized (with D. H. Boucher) a symposium entitled "The Ecology of Agriculture and Biological Pest Control" held at the annual American Association for the Advancement of Science (AAAS) meeting in Toronto, Canada, January 8. The proceedings will be published by AAAS.

Robert F. W. Schroder and William P. Dodson, Jr., Beneficial Insect Introduction Laboratory, IIBIII, were on assignment in Mexico from September 11 to October 2, 1980, conducting field surveys to determine the presence of the ectoparasitic mite, Coccipolipus epilachnae Smiley on Mexican bean beetles. The work was done in cooperation with Dr. Jose L. Carrilo S., National Coordinator in Biological Control, Secretaria De Agricultura Y Recursos Hidraulicos, Instituto Nacional De Investigaciones Agricolas, Mexico. This trip was part of a cooperative program with the Mexican government.

The British Museum (Natural History) recently published a three-volume "Reference Guide to Animal Identification." References to publications useful in making identifications for all animal groups throughout the world are included. Many publications by most taxonomists of the Systematic Entomology Laboratory, IIBIII, are noted. Among these, 13 publications by E. W. Baker, 8 by J. P. Kramer, and 7 by R. D. Gordon were noted. Dr. Kramer was also the most frequently referenced author of all world specialists on cicadelloid leaf hoppers, which are the vectors of many important plant diseases.

Robert S. Rew, Ruminant Parasitic Diseases Laboratory, API, attended the National Wool Grower's Meeting in San Antonio, Texas, on January 26-28. He spoke to the Animal Health Committee on "Progress in Anthelmintic Research" and to the Resolution Committee on research priorities for sheep diseases. Dr. Rew spoke to the general session on "Controlled-Release Anthelmintics." He traveled to North Texas State University, Denton, where he talked with Drs. B. Harris and M. Donahue on problems in biochemistry of helminths, and presented a seminar to the Biology Department on "Mode of Action of a New Fasciolicide."

Suzanne W. T. Batra, Beneficial Insect Introduction Laboratory (BIIL), IIBIII, received a travel grant from the National Science Foundation to attend the V International Symposium on Biological Control of Weeds, held last July, in Brisbane, Australia. Dr. Batra presented a paper entitled "Puccinia santhii f. sp. ambrosia - trifidae, a rust of potential value for the biological control of giant ragweed, Ambrosia trifida."

Alan W. Taylor, Chief, Soil Nitrogen and Environmental Chemistry Laboratory, AEQI, has been appointed to a 3-year term as an Associate Editor of the Soil Science Society of America Journal.

David R. Smith, Systematic Entomology Laboratory (SEL), IIBIII, recently assumed the editorship of the Proceedings of the Entomological Society of Washington. Since 1958 the editors of the Proceedings have been, consecutively, R. H. Foote, J. L. Herring, P. M. Marsh, L. Knutson, and M. B. Stoetzel, all of the SEL. Seventeen members of the USDA insect taxonomy unit have served as editors of the Proceedings since its founding in 1898.

Recently, Mr. Cheng Chaw Ying, General Manager of government-supported mushroom cultivation and processing companies in Sao Paulo, Brazil, discussed production problems with James P. San Antonio, Vegetable Laboratory, HSI.

Mr. Boris N. Matsov, FAO Fellow from Bulgaria, recently completed a study tour in the Germplasm Resources Laboratory (GRL), PGGI. The purpose of his study tour was to become acquainted with the organization, techniques, and problems involved in germplasm exchange, evaluation, and breeding research in plant genetic resources of cereal crops. During his study tour, Mr. Matsov was assigned to Albert J. Oakes, of GRL, as his principal contact. This international training, sponsored by FAO, has established additional lines of communication which should be mutually beneficial in future exchanges of cereal crop germplasm and information.

K. Darwin Murrell, Chief, Non-Ruminant Parasitic Diseases Laboratory, API, and visiting scientist Dr. Shou-Tai Hsu, Shanghai Laboratory of Schistosomiasis, People's Republic of China, were recently invited to visit the Pitman-Moore Research Laboratory, New Hope, Pennsylvania, to discuss schistosomiasis control.

Dora K. Hayes, Richard W. Miller, and Lawrence G. Pickens, Livestock Insects Laboratory, AEQI, attended a USDA-University of Florida Workshop on Biological Control of Filth Breeding Flies at Gainesville, Florida, in February. Dr. Miller and Mr. Pickens presented talks on a portion of the pilot test, "An Evaluation of Sticky Panel Traps to Augment or Replace Insecticides for Face Fly Control," and on immature forms of fly pests of cattle.

P. A. Putnam

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

United States Department of Agriculture
Science and Education Administration
Agricultural Research Northeastern Region Beltsville Agricultural Research Center
Beltsville Maryland 20705

NOTES FROM THE DIRECTOR

No. 122 March 18, 1981

IMMINENT 1981 BELTSVILLE SYMPOSIUM IN AGRICULTURAL RESEARCH

(A. A. Piringer, Chairman)

The sixth in the annual series of BARC-sponsored Symposia in Agricultural Research will take place at BARC during May 17-20, 1981. This Symposium entitled "Strategies of Plant Reproduction," is planned as a modern synopsis of plant reproduction with emphasis on both recent research and possible application in crop production. More than 600 local, national, and international respondents from Government, academia, and industry indicated an early interest for more information and are currently registering at a propitious rate. Space is limited to the 500-person capacity of the BARC Auditorium. USDA participants are exempt from the registration fee but the mandatory advance registration now will assure a seat.

The Symposium will open informally at 7 p.m., on Sunday evening, May 17, with a reception and social period in the Bioscience Building (011A) at BARC-West. The Symposium banquet will be held during the evening of Tuesday, May 19, 1981, at the University of Maryland's Adult Education Center. Plantsman planner Dr. Merle Jensen, of the University of Arizona, will guide gratified gastronomes through the phantasmagoria of an educational Pavilion planned at Disneyland showing the fanciful future of agriculture. BARC scientists are urged to participate in the phyto-fellowship of the reception and banquet. Information and registration forms are readily available from A. A. Piringer, Room 130, Building 003, BARC-West, or call Mrs. Rosa Chiddo on 344-3338.

SOURCES OF FIBER INFORMATION

BARC has an extensive worldwide collection of reprints and photographs on plant fibers assembled during the past 75 years (e.g., flax, hemp, jute, ramie, sisal, and abaca (Manila hemp). The USDA research, started in the days of the USDA Arlington Farm, was discontinued in 1966. Anyone wishing to utilize the collection should call Dr. Elton G. Nelson (retired) at his home (301) 320-3442, or leave a message with the Germplasm Resources Laboratory, PGGI, FTS 344-3637. Dr. Nelson was active in fiber research from 1937 until he retired in 1970.

YOUNG ADULT CONSERVATION CORPS (YACC)

It is a pleasure to report that during the period January 15 through March 2, 1981, six enrollees have resigned from the YACC to accept permanent full-time employment. Another enrollee resigned to return to college to pursue a career in Medical Laboratory Technology. Through YACC work experience and career counseling these enrollees were able to obtain jobs in such positions as Biological Aide, Maintenance Worker, Clerk, Receptionist, and Auto Mechanic. We wish these former

enrollees continued success in their careers. Hopefully, through continued valuable work experiences, career counseling, and future career workshops more enrollees will obtain permanent jobs because of their participation in the YACC program.

PERSONNEL

BARC Employee Profile (Sample 756 of @ 1,000):

Sex: Male - 69% Female - 30%

Minority:	Eskimo	0.1%	Hispanic:	Yes	0.7%
	Asian	2.2%		No	94.3%
	Black	10.2%			
	White	84.6%			
	Other	0.9%			

New Laboratory Chiefs:

James H. Elgin, Jr., has been named the new Chief, Field Crops Laboratory, PGGI, at BARC. Dr. Elgin is well known for his contributions to the field of alfalfa breeding and genetics. He started his professional career in 1969 at the Irrigated Agriculture Research and Extension Center, Prosser, Washington, where he was responsible for research on breeding alfalfa resistant to the stem nematode. Numerous breeding lines were subsequently released. In 1974 Dr. Elgin transferred to BARC where he has since been responsible for alfalfa breeding and genetic research in the Field Crops Laboratory. Major areas of research at BARC have been in developing alfalfa populations with improved resistance to diseases, insects, and soil mineral toxicities.

William P. Wergin, Research Plant Physiologist, accepted the position of Chief, Plant Stress Laboratory, PPHI, in November. Dr. Wergin received his Ph. D. in plant cell biology from the University of Wisconsin, Madison, in 1970. He joined ARS in September of that year as Plant Morphologist in the Investigations Unit, Nature of Resistance to Disease and Insect Attack. In 1972 he was transferred to the Weed Science Laboratory, Stoneville, Mississippi. In 1974 he returned to Beltsville where he has had assignments in the Reproduction Laboratory, ASI (1974-1979); Nematology Laboratory, PPI (1974-1980); and Cell Culture and Nitrogen Fixation Laboratory, PPHI (1980). Since 1974 he has also been responsible for management of the Electron Microscope (EM) Facility, Bldg. 177B, BARC-East. In the Plant Stress Laboratory his research will utilize the instruments in the EM Facility to examine the subcellular structure function relationships on plants subjected to environmental or biological stresses.

FAO Fellow:

Dr. Elizabeta Mirghis, Research Institute for Vegetable and Flower Crops, Vidra, Ilfov, Romania, ended a 60-day tour of training in the Vegetable Laboratory, HSI, on March 6. She studied vegetable crop improvement with Stephen L. Sinden, Lind L. Sanford, and Gilbert D. McCollum.

HONORS AND AWARDS

Quality Increase:

Seib, Carol F., Meat Science Research Laboratory, ASI.

* * * * *

Jack R. Plimmer, Chief, Organic Chemical Synthesis Laboratory, AEQI, was recently appointed to the American Chemical Society (ACS) Joint Board/Council Committee on Environmental Improvement for 1981-1983. Dr. Plimmer previously participated in the ACS study "Cleaning Our Environment--The Chemical Basis for Action" published in 1978.

EMPLOYEE ACTIVITIES

A team of scientists from the Insect Reproduction Laboratory (Thomas J. Kelly, team leader; Charles W. Woods; and Alexej B. Borkovec) in cooperation with Robert E. Redfern (Livestock Insects Laboratory) discovered a new molting hormone of the large milkweed bug, Oncopeltus fasciatus. Previously, 20-hydroxyecdysone was believed to be the molting hormone in all insects. New data obtained by the research team have now shown that 20-hydroxyecdysone was only slightly active in inducing molting in O. fasciatus whereas another ecdosteroid, makisterone A, was highly active in the O. fasciatus bioassay. The team has also found strong evidence for the presence of makisterone A in the hemolymph and whole body extracts of O. fasciatus larvae, in which 20-hydroxyecdysone and its precursor, ecdysone, were present in only small quantities. This discovery of a new insect molting hormone opens up new approaches to studies of insect development and reproduction.

K. Darwin Murrell, Chief, Non-Ruminant Parasitic Diseases Laboratory (NRPDL), API, is serving as the doctoral dissertation advisor for Ms. Carol Durham, graduate student in the Department of Zoology, Howard University. Ms. Durham will be working in Dr. Murrell's laboratory studying the role of immediate hypersensitivity in immunity to Trichinella spiralis.

K. Darwin Murrell, Chief, Non-Ruminant Parasitic Diseases Laboratory (NRPDL), API, and Joseph Urban, NRPDL, have been invited to speak at a symposium on immunoparasitology to be held June 17-19, at Lincoln, Nebraska. The meeting is being sponsored by the Norden Company and is being organized by Dr. Gary Zimmerman, School of Veterinary Medicine, Oregon State University, Corvallis.

Robert H. Miller, Chief, Milk Secretion and Mastitis Laboratory, ASI, was invited to speak on "Genetic Resistance to Mastitis" at the annual meeting of the National Mastitis Council held in February in Louisville, Kentucky.

Stephen L. Sinden, Plant Physiologist, Vegetable Laboratory, HSI, is on a 6-month study tour at Kansas State University, Manhattan. He will be exploring techniques and methodology for protoplast isolation and fusion in major vegetable crops.

VISITORS

Denmark--Dr. N. O. Klastrup, National Veterinary Serum Laboratory, Ringsted, visited W. D. Schultze and other Milk Secretion and Mastitis Laboratory (ASI) personnel on March 2-4. They discussed mutual interests in the field of mastitis research.

Iraq--The Assistant Minister of Health from Iraq, Dr. Jalal, visited BARC on March 4. He consulted with Lawrence G. Pickens, Bryant M. Cawley, Jr., and Kathleen L. Staker, Livestock Insects Laboratory, AEQI.

Louisiana--Dr. E. D. Besch, Dean, School of Veterinary Medicine, L.S.U., visited the Animal Parasitology Institute February 5-13. Dr. Besch is on a sabbatical and interested in updating his awareness of recent developments in veterinary parasitology research, his former area of expertise. Dr. Besch visited Ronald Fayer, Frank W. Douvres, Frank G. Tromba, J. Ralph Lichtenfels, Kenneth L. Kuttler, and Harry Herlich.

Pakistan--Dr. Kauser A. Malik, Chairman, Department of Soil Microbiology, Nuclear Research Institute for Agriculture, Pakistan, recently visited Likh R. Batra, Mycology Laboratory, PPI. The two scientists are engaged in collaborative research on nitrogen fixation by microflora of termite gut. Professor Sultan Ahmad, National Professor, also from Pakistan, is working with Dr. Batra for 4 months on fungi of economic importance to Pakistan.

Sao Tome--Mr. Gomes, Minister of Agriculture, and Mr. Branco, Minister of Education and Culture, were greeted by P. A. Putnam, Director, on March 9. The Visitor Unit provided a "windshield tour" of the Center. The visitors also met with Anson E. Thompson, Crop Sciences, NPS. The services of the Technical Information Systems group were explained to Messrs. Gomes and Branco by Dean Gamble, Idalia Acosta, Harry Dewey, and Boba Stamenkovich.

National Potato Council

Nineteen members of the Steering Committee of the National Potato Council visited BARC on February 20. P. A. Putnam welcomed the visitors and explained the nature, direction, and philosophy of research, including that of the potato group centered at BARC. Steven C. King, Regional Administrator, gave an overview of potato research and relationships with States and other Federal agencies and recent potato research redirections. A tour of BARC was presented by the Visitor Unit. William W. Cantelo, George E. Cantwell, Robert W. Goth, Lind L. Sanford, and Raymon E. Webb, Vegetable Laboratory, HSI, participated in an onsite review of the various facets of the potato research programs at BARC.

Ambassadorial Visit

Dr. Grunert, Ambassador to the U.S. from the German Democratic Republic (East Germany) and his Agricultural Attache, Dr. Schultz, spent the entire day at BARC on February 19. Research projects visited included: Instrumentation (Karl H. Norris); Fruit Tissue Culture (Miklos Faust and Richard H. Zimmerman); Animal Parasitology (Harry Herlich, Michael Ruff, and Darwin Murrell); Dairy Genetics (Duane Norman); Poultry Physiology (Tom Sexton); Swine and Cattle Reproduction (Harold Hawk and Vernon Pursel); Tissue Culture and Nitrogen Fixation (Gideon Schaeffer, Lowell Owens, and Charles Sloger); Biological Control (George Papavizas); Potato Breeding (Raymon Webb); U.S. Small Grain Collection (John Moseman and David Smith); and Animal Nutrition (Henry Tyrrell and Dale Waldo). Dr. Grunert expressed interest in working out a scientific exchange agreement with the USDA.

P. A. Putnam

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

United States Department of Agriculture
Science and Education Administration
Agricultural Research Northeastern Region Beltsville Agricultural Research Center
Beltsville Maryland 20705

NOTES FROM THE DIRECTOR

No. 123 May 6, 1981

TRAVEL $$ SAVINGS

Recently, an important review of the National Plant Germplasm System required travel by eight persons from BARC to Peoria, Illinois. By traveling in a Government van, $1,800 in air fare was saved, a savings equal to the actual cost of the trip. More of our scientists may be allowed to attend and participate in important meetings if Government vehicles are utilized instead of relying on the more costly expense of airline tickets, especially when several scientists are attending the same meeting.

SAFETY

I thought you might be interested in the accident record at BARC for 1979 and 1980, as well as the first quarter of 1981. This should give you some idea as to the main safety problem areas.

YEAR	Fire	Motor Vehicle	First Aid	No Lost Time	Lost Time	Days Lost
1979 Total	0	11	44	24	20	143
1980 Total	2	13	27	25	16	224
1981 First Quarter	0	4	2	14	4	15

YOUNG ADULT CONSERVATION CORPS (YACC)

The YACC Program Leaders would like to congratulate Elroy Allums, Milk Secretion and Mastitis Laboratory, ASI, on his new position with the Dairy Equipment Company, International, located at Madison, Wisconsin. As a member of the Product Research Team he will spend 60 percent of his time performing international travel. We also thank Mr. Allums for his participation as a member of the YACC Review Board during the past 7 months.

COOPERATIVE ACTIVITIES

Vegetable Laboratory/Delaware State College Interaction:

These two organizations continued their yearly cooperative activity to encourage students to become interested in careers in some facet of the horticultural and/or entomological sciences. Thomas H. Barksdale, Vegetable Plant Pathologist, and William W. Cantelo and George E. Cantwell, Entomologists, gave formal lectures to students at Delaware State College on laboratory research programs underway on

diseases and insect pest management in vegetable crops. Career potentials in both sciences were discussed. On April 23, Professor J. T. Howell and 10 students from Delaware State visited the Vegetable Laboratory and reviewed ongoing research on interspecific hybridization and cytoplasmic male sterility in onions and cole crops (Gilbert D. McCollum); potato breeding (Phil Baum, Lind L. Sanford, and Lab Chief Raymon E. Webb); and potato and vegetable diseases (Robert W. Goth).

CLARIFICATION OF ECDYSTEROID STUDIES IN THE MILKWEED BUG

Certain information requires clarification that was included in a paragraph submitted to the Notes from the Director dated March 18, 1981. This concerns a description of research carried out by Thomas J. Kelly, Charles W. Woods, and Alexej B. Borkovec (Insects Reproduction Laboratory, AEQI), and Robert E. Redfern (Livestock Insects Laboratory, AEQI) in which it was stated that a new molting hormone of the large milkweed bug, Oncopeltus fasciatus, was discovered. In fact, the isolation and positive identification of Makisterone A from the embryo of this species was reported in Science, in 1975, by John N. Kaplanis and associates of the Insect Physiology Laboratory, PPI. In recent followup studies, Jeffrey R. Aldrich and coworkers of the Insect Physiology Laboratory discovered that injecting Makisterone A induced molting in adult female milkweed bugs and inhibited egg development and that this ecdysteroid was much more active than 20-hydroxyecdysone. Mr. Kelly and associates had provided evidence by means of high pressure liquid chromatography and radioimmunoassay that an ecdysteroid other than ecdysone or 20-hydroxyecdysone, probably Makisterone A, was the major ecdysteroid in the hemolymph of last instar nymphs and, following consultation with Dr. Aldrich, demonstrated that Makisterone A was more active in induction of molting in last instar milkweed bug nymphs than 20-hydroxyecdysone. Indepth studies of the effects of various ecdysteroids in this and related hemipteran species are being pursued in collaborative studies by Drs. Aldrich and Kelly.

EMPLOYEE ACTIVITIES

Donald T. Krizek, Plant Stress Laboratory, PPHI, chaired the North Central Region (NCR-101) Committee on Growth Chamber Use Meeting, held March 10 at Raleigh, North Carolina. He also attended the meeting of the American Society for Horticultural Sciences Working Group on Growth Chambers and Controlled Environments which was held on March 12.

Three Research Entomologists from the Systematic Entomology Laboratory (SEL), IIBIII, were guest lecturers in an Advanced Microanalytical Workshop given for Regional Biologists, at the Washington, DC, headquarters office of the Department of Health and Human Services, Food and Drug Administration, April 6-10. Raymond J. Gagne and Robert L. Smiley gave an afternoon-long laboratory session on identification of flies and mites likely to be found in stored products. John M. Kingsolver provided training in identification of the Khapra beetle. Candy Feller, Editorial Assistant, SEL, lectured on techniques of scientific illustration.

I was pleased recently to see Brazilian news coverage of Charles D. Foy's visit to Brazil. This was accompanied by a list of the contacts during his short-term consultant visit to Brazil. It is obvious from the number of seminars, lectures, and contacts that Dr. Foy's research on soil aluminum, soil acidity, and plant production has been well and extensively delivered and should have an important impact on this part of the Southern Hemisphere. The whole experience nicely illustrates that the mission of AR exceeds the borders of our own country and contributes significantly toward helping to produce food for people around the world.

PERSONNEL

BARC Employee Profile (Sample 756 of @ 1,000)

Education Level:	Percent
Elementary	2.5
Some High School	3.4
High School	14.6
Technical Training	8.1
Some College	9.2
College	10.8
Some Graduate School	9.2
Graduate Degree	39.5

Age:	Percent
Less than 20	0.3
20-29	15.6
30-39	26.4
40-49	25.9
50-54	12.5
55-59	10.5
60-64	5.1
More than 65	2.1

Field of Study:	Percent
Agriculture	29.4
Biology	27.2

New Laboratory Chief:

Ganapathy R. Chandra has been appointed as the new Chief, Seed Research Laboratory, PGGI. Dr. Chandra is a Research Chemist conducting research on plant hormones as well as seed germination and dormancy. He plans to continue investigating gene expression in germinating seeds. Dr. Chandra joined USDA in 1966. He assumed his new responsibility on February 8, 1981.

Louis C. Gasbarre joined the staff of the Ruminant Parasitic Diseases Laboratory, API, on April 6. Dr. Gasbarre is an immunologist who just completed a post-doctoral fellowship with the World Health Organization in Lausanne, Switzerland, where he worked on cellular immune responses to a protozoan parasite of cattle. He completed his doctoral studies at the Department of Zoology, University of Maryland, in 1978. He and his family have just taken up residence in Brunswick, Maryland.

Dr. Elvira Paz will take sabbatical leave this summer from the University of the District of Columbia to work at the Meat Science Research Laboratory (MSRL), ASI. Dr. Paz received her Ph. D. in 1972 from Wesleyan University where she

studied Comparative Metabolism of Ethanol and Acetate in Fusarium solani phaseoli. Dr. Paz has been an Associate Professor for the past 7 years in the Food Science Department within the College of Life Sciences. She will be working with Norman Stern at the MSRL pursuing studies on improvement in detection capabilities of the foodborne pathogen, Campylobacter fetus ssp. jejuni.

HONORS AND AWARDS

Honor:

Essex E. Finney, Jr., Assistant Director, (on detail to the Office of Science and Technology Policy) has been recently honored by being elected as an alumni member of the Honor Society of Agriculture Gamma Sigma Delta, at the Virginia Polytechnic Institute and State University chapter. Induction of Dr. Finney and other new members is scheduled for May 22.

Science Fair Winner:

Peter Tromba, son of Frank G. Tromba, Non-Ruminant Parasitic Diseases Laboratory, API, was the first place winner in the category of Medical Sciences at the Prince George's Area Senior High School Science Fair. Peter also won a number of special awards from various institutions and services: a first place medallion from the U.S. Army; a second place certificate from the U.S. Navy; a first place certificate from the U.S. Air Force; a $50 cash award from Sigma Xi/FDA; and a certificate and a tour of BARC from OPEDA. His project was entitled "Monoclonal Antibody Specificity."

Cash Awards:

Enzian, Preston A., Farm Management Branch, Division of Operations.
Fulton, Loren A., Milk Secretion and Mastitis Laboratory, ASI.
Johnson, Walter, Jr., Maintenance and Construction Branch, Division of Operations.
Parker, Barbara E., Nematology Laboratory, PPI.
Salley, E. Jean, Index-Catalogue of Medical and Veterinary Zoology, API.
Wilson, Gary F., Utilities and Services Branch, Division of Operations.

Quality Increases:

Hooven, Norman W., Jr., Animal Operations Unit, Director's Office.
Keithley, Paulette M., Plant Hormone and Regulators Laboratory, PPHI.
Miles, Giles D., Livestock Insects Laboratory, AEQI.
Miller, Victor L., Farm Management Branch, Division of Operations.
Phillips, Banner L., Ruminant Nutrition Laboratory, ASI.
Pope, Margaret A., Mycology Laboratory, PPI.

Group Awards:

Organic Chemistry Laboratory, AEQI
Klun, Jerome A. - Leonhardt, Barbara A. - Plimmer, Jack R. - Schwarz, Meyer.

Parasite Classification and Distribution Unit, API
Hanfman, Deborah T. - Jones, Cheryl L. - Kirby, Margie D. - Zidar, Judith A.

VISITORS

Federal Republic of Germany (FRG)--Dr. Dieter Sauerbeck, Director, Institute of Plant Nutrition and Soil Science, German Federal Research Center of Agriculture, Braunschweig, FRG, visited BARC on April 6. He met with James F. Parr, Chief, and Rufus L. Chaney, Biological Waste Management and Organic Resources Laboratory, and Alan W. Taylor, Chief, and Harry M. Kunishi, Soil Nitrogen and Environmental Chemical Laboratory, AEQI. Discussions involved recycling and processing of municipal wastes as fertilizers, interactions and regulation of heavy metals in land applied wastes, movement and solubility of phosphorus and pesticides in land applied wastes.

India--Mr. S. Varadachary, Indian Embassy, Washington, DC, visited scientists in the Biological Waste Management and Organic Resources Laboratory, AEQI, the latter part of February to obtain information on waste management research programs conducted by that laboratory. His interest was centered on transfer of composting technologies developed at Beltsville which could be implemented in Indian municipalities and cities.

Japan--Dr. Akihiho Hayami, Research Coordinator, Agriculture, Forestry and Fisheries Research Council, Ministry of Agriculture, Tokyo, visited George B. Willson and Larry J. Sikora, Biological Waste Management and Organic Resources Laboratory, AEQI, on March 18. They visited the BARC composting facility and discussed conversion of biomass to energy.

Japan--Dr. Masaaki Machida, National Science Museum, Tokyo, visited J. Ralph Lichtenfels, Head, Parasite Classification and Distribution Unit, API, on April 6-9 to discuss curatorial practices and study specimens in the National Parasite Collection.

Korea--A six-man team of governmental veterinarians and cattle specialists from the Republic of Korea, and Mr. M. T. Callahan, International Program Manager of the U.S. Feed Grains Council, visited the Animal Parasitology Institute on April 9. Harry Herlich, Chairman, briefed the visitors on the cattle parasite research programs of the Institute.

Netherlands--On February 13, Drs. Erik Mischgofsky, Head of Physical and Chemical Research, and Michael Loxham, Project Engineer, Delft Soil Mechanics Laboratory, Delft, Netherlands, met with scientists and engineers of the Biological Waste Management and Organic Resources Laboratory, AEQI, to discuss strategies for land farming and land treatment with hazardous wastes.

New Jersey--On Wednesday, April 8, a group of eight mycology students from Glassboro State College visited the Mycology Laboratory, PPI. Paul Lentz, Laboratory Chief, and Lekh Batra, Botanist, met with the visitors and briefed them on the mycology research being performed here at BARC, and conducted a tour of the laboratory facilities.

Phillipines--Professor Mauro F. Manuel, Chairman, Department of Veterinary Parasitology and Protozoology, University of the Philippines, Quezon City, visited the Animal Parasitology Institute from April 7-9. He was especially interested in research on sarcocystosis, ruminant gasterointestinal helminthiasis, and kidney worm of swine. Professor Manuel was most impressed with the National Parasite Collection and the Index Catalogue services.

VISITOR UNIT QUARTERLY TABULATION:

During the quarter ending March 31, 1981, the Visitor Unit reports the following information:

No. of Visitors	High Level/Professional Groups/Individuals	Students	Other	Countries Represented
2,785	340	732	1,713	26

SURPLUS EQUIPMENT

Item	Condition	Contact	Ext.
Aminco Freeze Dry Apparatus 1962 Model. Pump rebuilt in 1974. Needs new vacuum gauge.	Working	J. L. Vaughn	43689

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

United States Department of Agriculture
Science and Education Administration
Agricultural Research Northeastern Region Beltsville Agricultural Research Center
Beltsville Maryland 20705

NOTES FROM THE DIRECTOR

No. 124 June 16, 1981

BARC SYMPOSIUM VI SYNOPSIS (Submitted by A. A. Piringer, Chairman)

The sixth in the now eminent series of BARC Symposia, "Strategies of Plant Reproduction," was accomplished during May 17-20, 1981, at Beltsville. The saliently successful Symposium VI attracted 330 scientists representing the Department, academia, and industry; the subject and speakers lured participants from Canada, Mexico, the Netherlands, United Kingdom, and many from the U.S.

Following a cordial Sunday evening wine and cheese convivial, Symposium VI was opened early on Monday morning by Symposiarch A. A. Piringer. BARC Director Paul A. Putnam welcomed the participants and dedicated Symposium VI "to the memories of Dr. Sterling B. Hendricks." During the next 2-1/2 days, 26 invited symposiasts collectively articulated about broad aspects of plant reproduction and diligently discussed a wide range of topics from basic and theoretical concepts to practical applications. The Symposium VI was succinctly summarized by G. G. Still, Chief Scientist for Plant and Entomological Sciences, SEA, USDA.

At the banquet, Dr. Merle Jensen, Horticulturist, University of Arizona, Tucson, charmed guests with his kaleidoscopic peep at plants, and plans applying plant physiology at Walt Disney World to tell the story of tomorrow's food today.

Significantly, Committeeman Werner J. Meudt, Plant Hormone and Regulators Laboratory, PPHI, BARC, continues to dedicate himself to the urgent terminal task as Editor of the Symposium VI Proceedings.

Be alerted that BARC Symposium VII, "Genetic Engineering: Applications to Agriculture," is planned for May 16-19, 1982. Symposium VII Symposiarch is Lowell Owens, Cell Culture and Nitrogen Fixation Laboratory, PPHI, BARC.

YOUNG ADULT CONSERVATION CORPS (YACC)

This month, the YACC Program spotlights one of its outstanding enrollees, Jerry Ford, and a former enrollee, John Collier. These two young men applied for and were accepted for 6-month temporary appointments as tractor operators in the Farm Management Branch. The YACC Program officials are proud to know that through participation in the YACC Program these young men were given the experience and training which enabled them to apply for these positions at BARC.

BARC COMMITTEE CHANGE

The BARC Building 306 Committee (established June 15, 1978) and chaired by N. Wakabayashi, Biologically Active Natural Products Laboratory, AEQI, is being abolished. The committee was organized to consider questions of interest in regard to usage of basement and attic space.

MEMBERS - BARC EEO COMMITTEE

Dr. P. A. Putnam - Chairman
Bldg. 003, Rm. 227, BARC-W
X-43078

Mr. Delbert Beane - Union
Bldg. 431, BARC-E
X-42595

Dr. Lila Vodkin - PGGI
Bldg. 006, Rm. 105, BARC-W
X-42491

Ms. Yen-i Wong, AEQI
Bldg. 306, Rm. 118, BARC-E
X-42474

Mr. Charlie McCall - DOBA
Bldg. 030, BARC-W
X-42750

Mr. Lonnie Neal - AnOp
Bldg. 262, BARC-E
X-42075

Ms. Pat Espenshade - IIBIII
Bldg. 003, Rm. 23, BARC-W
X-43521

Ms. Laura M. Franklin - API
Bldg. 1042, BARC-E
X-42150

Ms. Vallie Bray - PPI
Bldg. 011A, Rm. 214, BARC-W
X-43689

Ms. Ruth McConnell - FEW
Bldg. 308, Rm. 223, BARC-E
X-42157

Ms. Barbara Wood - FWP
Bldg. 263, Rm. 21, BARC-E
X-42334

Dr. David F. Farr - ASM
Bldg. 011A, Rm. 302, BARC-W
X-42274

Mr. Obie Patterson
NER-EEO Officer
Bldg. 003, Rm. 330, BARC-W
X-43507

Ms. Mamie E. Vernon - ATFARD
Bldg. 007, Rm. 201, BARC-W
X-43603

Ms. Judy Abbott - HSI
Bldg. 002, Rm. 6, BARC-W
X-43128

Ms. Mary Lou Lindholm
AOD Personnel
Bldg. 003, Rm. 102, BARC-W
X-43444

Ms. Vivian Kirkpatrick
Administrative Office
Bldg. 003, Rm. 219, BARC-W
X-43347

Dr. Elliott Berlin - BHNRC
Bldg. 308, Rm. 109, BARC-E
X-42297

Mr. A. L. Fleming - PPHI
Bldg. 001, Rm 206, BARC-W
X-43143

Ms. Deborah Haines - ASI
Bldg. 200, Rm. 207, BARC-E
X-42869

Ms. Judy Harrington
NER Hispanic Coordinator
Bldg. 003, Rm. 324, BARC-W
X-42756

HONORS AND AWARDS

Cash Awards:

Carpenter, Bessie L., Chairman's Office, PPHI.
Moran, Michelle M., Engineering and Planning Branch, Division of Operations.

Quality Increases:

Rexroad, Caird E., Jr., Reproduction Laboratory, ASI.

*****

USDA Awards Ceremony (5/28/81)

Superior Service Award:

Edward W. Baker, Systematic Entomology Laboratory (SEL), IIBIII, was recently presented the USDA Superior Service Award in recognition of his contributions to acarology, the study of mites--tiny relatives of insects. Mites can cause damage to livestock, agricultural crops, ornamental plants, and stored products. Dr. Baker proposed a classification system to simplify the identification of mites which is the basis for all mite classification today. In his 37 years with SEA's SEL at Beltsville, Dr. Baker concentrated his efforts on the plant-feeding mites which are important agricultural pests. Several of his books on mites have served as textbooks throughout the world.

Second Annual Awards Ceremony, Science and Education Administration (5/29/81)

Director's Awards:

Thomas J. Sexton, Chief, Avian Physiology Laboratory, ASI, "for development of a procedure to freeze chicken semen which has accelerated worldwide genetic improvement of the domestic chicken."

Martin Jacobson, Chief, Biologically Active Natural Products Laboratory (BANPL), AEQI, J. David Warthen, and Edward C. Uebel, BANPL, "for outstanding team effort in isolating, identifying, and developing methods to use natural chemicals in plants to inhibit insect infestation."

PERSONNEL

BARC Employee Profile (Sample 756 of @ 1,000)

Years of Federal Service	Percent
Less than 1	2.9
1-3	11.5
4-9	19.4
10-29	58.7
More than 30	6.1
Eligibility for Retirement	9.0
1-2 years	4.7
3-5 years	8.7
More than 5 years	77.4

DEATH OF RETIRED BARC SCIENTIST

Chester S. Parsons, Research Horticulturist, who retired in June 1972, died from heart failure on May 13 at his home in New Port Ritchey, Florida. Mr. Parsons, or "Chet" as he was called by his many Beltsville friends, completed 37 years of Federal service with the last 18 of those at the Beltsville Agricultural Research Center in the former Market Quality Research Division. From 1945 to 1951 he worked for the Soil Conservation Service at Manhattan, Kansas. Born in North Dakota, he earned his B.S. and M.S. degrees from Kansas State University.

His most significant contributions in horticulture involved research on improved methods of packaging and storing vegetables for U.S. Navy supply ships; storing and trimming lettuce and cabbage; freezing injury of vegetables; and controlled atmosphere storage (particularly the effects of very high levels of nitrogen gas) on tomatoes, peaches, and cut flowers.

EMPLOYEE ACTIVITIES

Manya B. Stoetzel, Systematic Entomology Laboratory, IIBIII, spent the week of March 30-April 3 working on the Aphidoidea Collection in the Department of Entomology at the British Museum (Natural History), London. Dr. Stoetzel was one of two aphid taxonomists in the U.S. to be invited to attend an International Symposium on the Evolution and Biosystematics of Aphids in Jablonna, Poland, on May 11. The meeting was attended by 32 aphid taxonomists from around the world. Dr. Stoetzel gave a presentation on the Biosystematics of Phylloxera on Pecans in North America." The proceedings will be published by the Institute of Zoology of the Polish Academy of Sciences.

George C. Papavizas, Soilborne Diseases Laboratory, PPI, was invited by the Dimock Lecture Committee to present the Eighth Dimock Lecture to the faculty and students of plant pathology and other sciences at Cornell University. The lecture, entitled "Soilborne Diseases--New Opportunities for Biological Control" was presented by Dr. Papavizas on April 30. The Dimock Lecture Series were established in memory of Dr. A. W. Dimock, Professor of Plant Pathology. In addition to presenting the lecture, Dr. Papavizas had the opportunity to visit with many staff members and graduate students.

Manya B. Stoetzel, Systematic Entomology Laboratory, IIBIII, visited the Department of Entomology at Pennsylvania State University (PSU), on May 4-5. She gave a presentation on "The Biology of Phylloxera on Pecan and Other Hosts in the United States." During her visit, Dr. Stoetzel also collected aphids and phylloxerans with John O. Pepper who, though retired from PSU since 1965, has continued to collect and work on aphids.

Lewis W. Smith, Chairman, ASI, cochaired Chapter 10 of "Animal Agriculture--Research to Meet Human Needs in the 21st Century" in May 1980. Recently, (May 11) as a followup to that conference, he briefed aides to the Senate and House Agriculture Committees on Animal Agriculture and the Environment. This was one of a series of seminars on "Animal Agriculture Research Priorities" arranged through the Congressional Research Service of the Library of Congress.

VISITORS

Denmark--Ms. Lizabeth Mortenson, Air Pollution Laboratory, National Agency of Environmental Protection, Rise National Laboratory, Roskilde, visited the Plant Stress Laboratory, PPHI, on May 11 and 12. She met with Howard E. Heggestad, Jesse H. Bennett, and Edward H. Lee. Her interest concerned the effects of ozone and sulfur dioxide on vegetation.

District of Columbia--Mr. Ray Lett, Executive Secretary to Secretary of Agriculture Block, Mr. Lett's parents, and friends of the family were hosted on a brief tour of BARC by Dr. Putnam on June 12. Projects visited included the rhizobia collection (Harold H. Keyser); fruit tissue culture; the energy metabolism facility, swine reproduction (Vernon G. Pursel); and a tour of the north farm plots; the large animal research area; and the sludge composting site.

District of Columbia--Dr. R. S. Fiske, Director, National Museum of Natural History, Smithsonian Institution, visited BARC the morning of June 10. He made brief stops at IIBIII's Systematic Entomology and Beneficial Insect Introduction Laboratories; was briefed on the Nematode, Rhizobia, Seed, and World Small Grain Collections; Fruit Laboratory (Tissue Culture); Mycology Laboratory; toured API and ASI; and the North Farm plots. Dr. Putnam accompanied the visitor on this (his first) visit to the Center.

Sweden--Carin Enfors, Horticulturist, with the Kooperativa Forbundet, Stockholm, visited R. E. Hardenburg, Chief, and J. A. Abbott, Horticultural Crops Quality Laboratory, HSI, on June 1. Ms. Enfors is a produce information specialist in the Cooperative's Fresh Foods Section, which handles about one-fourth of Sweden's food.

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

United States Department of Agriculture
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NOTES FROM THE DIRECTOR

No. 125 July 17, 1981

THE ANIMAL PARASITOLOGY INSTITUTE CELEBRATES 50 YEARS OF PARASITE RESEARCH

On Wednesday, July 1, 1931, the dream of Dr. Maurice C. Hall, Chief of the Zoological Division, Bureau of Animal Industry, USDA, became a reality. On that date, the first wholly controlled facility for research on the parasites of farm animals and birds of economic importance, which the Division had built on a 40-acre tract surrounding Chinquapin Hill on the Agriculture Department's farm near Beltsville, Maryland, acquired its own business office, headed by Lawrence Avery, D.V.M., Administrative Officer, and Mr. Sevellon B. Drury, his Administrative Assistant.

The scientific staff was composed of: Mr. John S. Andrews, Junior Zoologist; Miss Eugenia Cuvillier, Junior Zoologist; Mr. John T. Lucker, Junior Zoologist, and Paul C. Underwood, D.V.M., Assistant Veterinarian. Mr. Andrews assisted Gerard Dikmans, D.V.M., of the Division's Washington Staff, with research on the internal parasites of sheep; Miss Cuvillier, assisted Dr. Eloise B. Cram with her research on the worm parasites of poultry and game birds; Mr. Lucker assisted Dr. Benjamin Schwartz with his research on the life histories of the internal parasites of swine and on the development of methods to control the spread of horse parasites; and Dr. Underwood assisted Willard H. Wright, D.V.M., to develop new and more effective drugs for the removal of internal parasites from animals.

The following persons were listed as members of the labor force at the Beltsville Laboratory on its opening day: William M. Brewer, Charles W. Conway, Samuel Crump, Fred H. Curtice (son of Dr. Cooper Curtice, pioneer parasitologist in the Bureau of Animal Industry), Robert Lee Hodge, Clarence W. Kerns (foreman), Paul W. Kerns (brother of Clarence), Charles Ross, and Edward Walton (father-in-law of Dr. Willard H. Wright), animal caretaker.

(The very same John S. Andrews, mentioned above, went on to take an Sc.D. degree in Helminthology at the Johns Hopkins University, served as a member of the parasitology research team for 42-1/2 years (retirement 1975) and continues as an unpaid consultant preparing the official history of the USDA Animal Parasitology Program.)

PERSONNEL

Congratulations to Officer James N. Harris of the BARC Security Force for the dedication to duty shown by his recent assistance to the Park Police in successfully apprehending the occupants of a vehicle which was speeding on Powder Mill Road. The vehicle spun out of control and the occupants attempted to flee on foot. Officer Harris happened onto the scene and unhesitatingly pursued one of the subjects and provided necessary assistance to apprehend both of them.

PERSONNEL (Continued)

Diane D. Wilder recently joined the Systematic Entomology Laboratory (SEL), IIBIII, at the National Museum in Washington, D.C., as a Research Entomologist. Her duties encompass taxonomic research, identification, and curation of the oestroid flies, including the Tachinidae, a large group of natural enemies of insect pests. Dr. Wilder's area of responsibility was previously covered by Curtis W. Sabrosky who retired in September 1980, and continues his association with SEL as a full-time collaborator. Dr. Wilder earned her B.A. and M.S. degrees at Michigan State University, and her Ph. D. at Pennsylvania State University. Her Ph. D. thesis, since published, was a systematic revision of a group of tachinid flies parasitic on larvae of Scarabaeidae beetles. Dr. Wilder has been associated with the California Academy of Sciences for the past several years.

HONORS AND AWARDS

Cash Award:

Goodhue, Gertrude E., Biologically Active Natural Products Laboratory, AEQI.

Quality Increases:

Blount, Vansie L., Applied Plant Pathology Laboratory, PPI.
Bush, Eveline B., Biological Waste Management and Organic Resources Laboratory, AEQI.
Martinez, Lisa A., BARC Administrative Office.
Samuelson, Mary A., BARC Director's Office.
Scott, Mary M., Organic Chemical Synthesis Laboratory, AEQI.

More on the Profile of BARC Employees: (Sample 756 of @ 1,000)

Time in Present Job: (%)

Less Than 1/2	6.6
1/2 - 1	8.9
2 - 5	31.0
6 - 10	17.0
More Than 10	36.5

Category Label: (%)

GS	83.3
GW	0.3
WG	9.4
WS	2.1
WL	1.1
WD	0.7

Current Grade: (%)

1-2	0.8
3-4	7.8
5-6	19.5
7-8	14.2
9-10	13.4
11-12	15.6
13	10.6
14	11.3
15	6.2
16-18	0.4
EL4/EL5	0.1

Time (Yrs) in Grade: (%)

Less Than 1	19.7
1-2	20.7
3-5	29.0
6-10	19.8
More Than 10	10.8

Job Award in Past 10 Years: (%)

None	67.3
1	20.8
2	11.2
3	0.7

YOUNG ADULT CONSERVATION CORPS (YACC)

YACC Enrollment Profile (Sample 40 of @ 100)

Education Level:		Ages:	
Some High School	27.5%	16-19	50%
High School Graduate	65.0%	20-24	50%
Some College	5.0%		
College Graduate	2.5%	Minority Enrollment =	80%
		Female Enrollment =	45%

EQUAL EMPLOYMENT OPPORTUNITY (EEO)

Correction:

The extension number for Ms. Deborah Haines should be 42868 rather than 42869 as shown in the BARC EEO Committee listing of members in the June 16, 1981, issue of the "NOTES FROM THE DIRECTOR."

EMPLOYEE ACTIVITIES

Howard E. Heggestad, Plant Stress Laboratory, PPHI, participated in meetings of an international committee concerned with the effects of sulfur dioxide and its derivatives on terrestrial and aquatic ecosystems, at Leatherhead, Surrey, England, on June 1-3. A final report on the the subject will be completed in December of 1981. On June 5, Dr. Heggestad presented a lecture on "Recent Developments Concerning the Effects of Ozone and Sulfur Dioxide on Agricultural Crops in the USA," at the Department of Biological Sciences, University of Lancaster, Lancaster, England.

Martin Jacobson, Chief, Biologically Active Natural Products Laboratory, AEQI, attended work conferences with personnel of the APHIS Mexican Fruit Fly Program in Monterrey, Montemorellos, and Ciudad Victoria, Mexico, on April 27-30. Discussions were held on progress and plans of joint research to discover attractants for this pest of citrus fruit in Mexico and Texas.

* * * * *

On May 16, Melvin E. Getz, Analytical Chemistry Laboratory, AEQI, suddenly found himself on the "Road to Morocco" at the request of Dr. Ed Liebe of the Foreign Agricultural Service, to assist in a possible stored grain contamination problem. Using a portable microslide thin-layer chromatographic technique developed largely by himself, Mr. Getz was able to assist the local government chemist in Rabat to quickly establish the chemical identity of a grain protectant, its extent of distribution, and its quantitative levels. This information was then used by the Moroccan Ministry of Agriculture to initiate successful remedial action and salvage 600,000 bags of badly-needed wheat.

Mr. Getz, whose research on methodology for pesticide residue analysis extends over 28 years with USDA and FDA, has, for more than a decade, been involved with developing quantitative thin-layer chromatographic techniques and apparatus

EMPLOYEE ACTIVITIES (Continued)

for rapid, low cost screening of food commodities for chemical residues. Much of this work has also been valuable to developing countries since it does not require exotic or expensive equipment, stable electricity supplies, or high purity compressed cylinder gases.

COOPERATIVE RESEARCH

A 5-year cooperative laboratory and field research program conducted by Martin Jacobson, Chief, and Victor E. Adler, Biologically Active Natural Products Laboratory, AEQI, with Jesse J. Lam, Agricultural Engineer, and Alfred H. Baumhover, Entomologist, of the USDA Tobacco Research Laboratory, Oxford, North Carolina, has resulted in the isolation, identification, and synthesis of the sex pheromone produced by the adult male tobacco budworm moth, Heliothis virescens. The male of this highly destructive pest of tobacco, cotton, and many solanaceous plants is attracted to a calling female moth by her release of "virelure." During the premating courtship that follows, the male releases his pheromone which serves to repel other males. This pheromone is potentially useful to suppress mating by keeping the two sexes apart.

VISITORS

Eleven members of the Chesapeake Chapter, American Registry of Professional Entomologists, visited Neal O. Morgan, Livestock Insects Laboratory, AEQI, on June 10. Following are the names of the visitors and their business affiliation: Douglas W. S. Sutherland and Dale W. Parrish, EPA; Joseph H. Tarnopol, U.S. Army; William B. Hull, U.S. Army (Retired); Neil J. Lamb, U.S. Air Force, AFPMB; Eugene G. Thompson, U.S. Army, AFPMB; Roger H. Grothaus, U.S. Navy; John R. Gorham, FDA; Richard L. Ridgeway, USDA/ARS/NPS; Robert M. Altman, Maryland Department of Agriculture; and Eugene J. Gerberg, Insect Control and Research, Inc.

Australia--Dr. Gordon Burch, Soil Scientist, Commonwealth Scientific and Industrial Research Organization, Canberra, recently visited the Hydrology Laboratory, PPHI.

Brazil--Dr. Walter Mors, Federal University of Agriculture, Rio de Janeiro, visited the Biologically Active Natural Products Laboratory, AEQI, to discuss and receive information on insect control programs with feeding deterrents.

Denmark--Professor Mogens J. Jul, Ministry of Agriculture, Danish Meat Products Laboratory, Copenhagen, and Mrs. Jul, visited Anthony W. Kotula, Chief, Meat Science Research Laboratory, ASI, on June 19. They were interested in all phases of meat research with particular interest in nutrient content of meat, determination of species of origin in cooked sausage, and the etiology of Campylobacter fetus ssp. jejuni.

England--Recently, Mr. Walter Nightingale, International Pheromones, Ltd., Wirral, visited the Biologically Active Natural Products Laboratory, AEQI, to discuss attractants for Hawaiian fruit flies.

VISITORS (Continued)

England--Pennsylvania--Ohio--Dr. R. Ross, Research Manager of Country Kitchens, Langford, Avon, England; R. Guthrie, spawnmaker for the Mushroom Growers Association, Kennett Square, Pennsylvania; and Dr. W. Reinert, of Campbell's Pioneer Research Laboratories, Napoleon, Ohio; visited James P. San Antonio, Vegetable Laboratory, HSI, recently, to discuss mushroom spawn, germplasm, and cultivation technology.

Greece--Ms. Paroussi-Paraskevopoulou, Ministry of Agriculture, spent 4 days with Germplasm Resources Laboratory scientists. She is an FAO Fellow on a 3-month training program on germplasm maintenance, evaluation, and data computerization.

India--Mr. M. C. Goel, a visiting professor from India's Roorkee University, recently visited the Hydrology Laboratory, PPHI. Mr. Goel had spent 10 months at Colorado State University under a Ford Foundation grant.

Italy--Dr. Andrew Kovacs and Dr. Katalia Deseo-Kovacs, Societa Italo-Americana Prodotti Antiparassitari, Bologna, recently visited the Biologically Active Natural Products Laboratory, AEQI, to discuss insect feeding deterrents.

Japan--Dr. Shigeru Suzuki, Head of the Biometrical Laboratory of the National Institute of Agricultural Sciences, is on a 30-day study tour of Canada, the United States, Mexico, and Venezuela. Since his research specialties are plant germplasm processing and forage breeding, he spent 2 days with scientists in the Germplasm Resources and Field Crops Laboratories.

Liberia--Captain Harris Johnson, Chairman of the Agricultural Committee, and Mr. Orthello Brandy, Assistant Minister of Agriculture for Planning and Evaluation, were recently provided a general overview of BARC by John Fleming of the Visitor Unit.

Norway--Dr. Odvar Thorsen and Dr. Dag Mikkelsen, Borregaard A.S., Sarpsborg, visited the Biologically Active Natural Products Laboratory, AEQI, to discuss the marketing of synthetic insect sex pheromones for use in Scandinavian forest areas.

People's Republic of China--Chen De Ji, Chief Engineer, Survey and Exploration Department of the Yantze Valley Planning Office, and Yang Jicheng, Deputy Chief of Remote Sensing Application Center Ministry of Water Conservancy, recently visited the Hydrology Laboratory, PPHI.

South Africa--Mr. K. O' H. Murphy, Senior Hydrologist, and Herman Keuris, Hydrologist, Department of Water Affairs, Forestry and Environmental Conservation, recently visited the Hydrology Laboratory, PPHI.

VISITORS (Continued)

South Africa--The Vice President, A. Schlebusch, his son, and a companion, visited BARC the afternoon of July 2 and were greeted by Paul A. Putnam, Director, followed by brief but informative visits with Karl H. Norris, Lloyd Knutson, Philip C. Kearney, and Richard H. Zimmerman (in Building 003); Perry B. Cregan, Raymon E. Webb, James A. Svoboda, and Jack A. Lewis (in Range 1); and Helene Cecil, Vernon G. Pursel, Harold W. Hawk, and Anthony W. Kotula (in Building 200). A windshield tour of research plots and orchards was included in the visit.

Thailand--Dr. Punya Temcharoen of the Mahidol University, Bangkok, visited Anthony W. Kotula, Chief, and other staff members of the Meat Science Research Laboratory, ASI, on June 1. Dr. Temcharoen's interest was in meat quality control methods as well as Trichinella spiralis, which is quite prevalent in his country.

VISITOR UNIT QUARTERLY TABULATION

During the quarter ending June 30, 1981, the Visitor Unit reports the following information:

No. of Visitors	High Level/Professional Groups/Individuals	Students	Other	Countries Represented
4,875	853	1,212	2,810	33

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

United States Department of Agriculture
Science and Education Administration
Agricultural Research Northeastern Region Beltsville Agricultural Research Center
Beltsville Maryland 20705

NOTES FROM THE DIRECTOR

No. 126

August 21, 1981

BARC SPECIAL SYMPOSIUM--RESEARCH FOR SMALL FARMS

The BARC Special Symposium--Research for Small Farms is scheduled for November 15-18, 1981. The second announcement providing program and registration information is presently being circulated. The 3-day program will present more than 50 speakers. The purpose of the BARC Small Farms Symposium is to identify research needs, report research achievements, foster rapport of involved parties, provide information for farmers working with limited resources, and record the status of various efforts to enhance the well-being of this special segment of our agricultural life. Cochairmen Lloyd Knutson and Howard Kerr report that plans for the event are all in place.

The banquet is scheduled for Tuesday evening, November 17, at the Continuing Education Center, University of Maryland. The speaker is Mr. William C. Norris, Chairman and Chief Executive Officer, Control Data Corporation, Minneapolis, Minnesota. His address is entitled "Responding to the Technological Challenges of Small-Scale Agriculture." The banquet fee is $13.00 per person and tickets can be obtained from the Special Symposium Office, Room 230, Building 003, BARC-West. The telephone number is (301)344-3087.

COOPERATIVE RESEARCH

A 9-month Cooperative Research Program conducted by Richard M. Sayre, Nematology Laboratory, PPI, and David H. Crump, Nematology Department, Rothamsted Experimental Station, England, with Lawrence D. Young, Nematology Laboratory, Jackson, Tennessee, has resulted in finding and identifying--for the first time in the U.S.--the fungus Nematophthora gynophila, a parasite attacking the soybean cyst nematode. In England, the same fungus functions as a natural control agent of the oat cyst nematode. The potential of the fungus to suppress field populations of soybean cyst nematode will be investigated.

The Fruit Laboratory, HSI, has several visiting scientists here for a period of study and cooperative work. Dr. Susan Lurie (Israel) has just completed 1 month; Dr. Giora Zauberman (Israel) is beginning a 1-year stay; Dr. Dariusz Swietlik (Poland) is here for 1 year. Mr. Hou-ji Zhou and Mrs. Gang-li Li (People's Republic of China) are here to work on tree fruit nutrition.

The combined North American-European Fruit and Tree Nut Germplasm Resources Inventory has been completed and published by the Fruit Laboratory, HSI. The Inventory contains 35,000 entries. It represents all the North American collections in fruit and about 50 percent of the European collections. The Inventory was first published in 1977 and, at that time, contained only North American entries. This is the first attempt between the U.S. and European scientists to cooperate in a project of this magnitude. The Inventory will be updated every 3 years, and it is expected that all of the European collections will be represented in the 1984 publication.

ANIMAL EXPERIMENTATION LEGISLATION

Nationwide, humane societies and members of the animal rights movement have strongly supported Federal legislation proposing alternatives to animal experimentation. These alternative methods include: tissue culture, in vitro techniques, radioimmunoassay, models and dummies, use of computers and refined analytical techniques, and plants and lower organisms. Since the 97th Session of Congress convened, four pieces of alternative methods legislation have been introduced and referred to the Subcommittee on Science, Research, and Technology.

H.R. 566 - The Research Modernization Act was drafted by the United Action for Animals and proposes to establish a National Center for Alternative Research composed of representatives from each Federal agency which conducts or sponsors research and testing involving the use of live animals. H.R. 566 states "Effective in fiscal 1982, each agency represented within the Center will direct to the development of alternative methods of research and testing no less than 30% and no more than 50% of all appropriations made available to such agency for all research and testing programs conducted or sponsored by such agency involving the use of live animals."

H.R. 220 - The Humane Methods of Research Act authorizes that $12 million be appropriated each year, for 5 years, for grants to study and utilize alternative methods to minimize the use of live animals.

H.R. 930 - Protection of Animals in Research Act proposes to establish a Commission to study alternative methods to the use of live animals in laboratory research and testing. The Commission would have a life span of 5 years and an annual budget not to exceed $750,000 per year.

H.CON.RES. 38 resolves that the Federal Government should take appropriate steps to develop new research methods not using live animals. It also states that no Federal funds should be provided for research projects using live animals if alternatives exist.

* * * * *

YOUNG ADULT CONSERVATION CORPS (YACC)

The Northeastern Region will have 30 YACC slots for FY 82. Fifteen slots will be allocated for Beltsville and 15 for the Arboretum. The Plum Island YACC Camp will discontinue its operations on September 30, 1981. The Beltsville and Arboretum Camps will merge and one managing office (located at BARC) will handle payroll and other administrative functions. The YACC program is scheduled to officially phase out as of June 30, 1982. All inventoried equipment will be transferred to the Job Corps.

* * * * *

EQUAL EMPLOYMENT OPPORTUNITY (EEO)

"Workplace Hustle," a 30-minute film on sexual harassment, is scheduled to be shown in the Building 003 Auditorium between 12 noon and 1 p.m., Thursday, September 17. Marva Jett, Acting Head of the ARS EEO Staff, will introduce the film with a short presentation and, following the showing, will answer viewers' questions. I urge all employees to attend!

PERSONNEL

Steffens to be a Visiting Professor:

George L. Steffens, former Chief of the Plant Hormone and Regulators Laboratory, will be a Visiting Professor at Cornell University from September 1981 through August 1982. During his temporary duty at Cornell, Dr. Steffens will be a research collaborator with Dr. Ralph L. Obendorf, Professor of Crop Science, in the Department of Agronomy. His research will center on studies on the influence of plant hormones and other growth substances on the growth and development of isolated soybean organs in nutrient culture. This is an area of research which Dr. Steffens plans to continue upon his return to Beltsville in 1982. In addition to pursuing his research program, Dr. Steffens also will have an opportunity to attend classroom lectures on recent advances in plant physiology, biochemistry, and horticulture.

Seed Research Laboratory Welcomes New Staff:

The Seed Research Laboratory (SRL), PGGI, welcomes a number of visiting scientists and summer employees who joined the Laboratory. Dr. Olfat El-Bagoury is Professor of Agronomy at the University of Ain Shams, Cairo, Egypt. She will be working in the area of soybean seed vigor. Dr. Elizabeth S. Maxwell, Biochemist with the National Institutes of Health, Bethesda, prior to her retirement, and Dr. S. Muthukrishnan, Assistant Professor at Kansas State University, Manhattan, are working in the area of molecular mechanism(s) for gene expression in germinating and dormant seeds. This area of research is further strengthened by the cooperation of Assistant Professor Eugene L. Vigil, and graduate students Mr. George Albaugh and Ms. Tracie Lango, Department of Botany, University of Maryland. Mr. Granville Moore, Microbiologist, U.S. Navy (retired), is conducting research to develop procedures for seed sterilization technology.
Ms. Vivian K. Toole, a former staff member, has continued to provide SRL with her expertise in the area of seed germination and dormancy. Mr. Chho Duong and Ms. Betina Jackson joined the Laboratory under the High Ability Student Summer Program. The visiting and cooperating scientists have greatly enriched the Laboratory's expertise in almost all disciplines of agriculture.

Research Apprenticeship Program:

Angela Knight, a senior at Ballou High School in Washington, D.C., is working this summer with Thomas J. Henry, Research Entomologist at the Systematic Entomology Laboratory, IIBIII, (at the U.S. National Museum of Natural History) under the Research Apprenticeship Program. Miss Knight is learning how to use laboratory equipment; collect, mount and label insect specimens; manage an insect collection; and make identifications of insects at the order and family levels. The program is designed to give high school students an exposure to the agricultural and biological sciences.

PERSONNEL (Continued)

Vocational Guidance Project - Job Information System:

Teachers and counselors from the Prince George's County public school system recently visited various facilities to evaluate characteristics and training sought by employers in young job applicants. BARC participated by playing host to four teams for a 3-day visit from July 29 through 30. One team spent 1 day in each of three laboratories of the Horticultural Science Institute and gained some hands-on experience in field and laboratory research. Another team visited all of the laboratories of the Plant Protection Institute evaluating skills for employees at all levels of agricultural research. Two teams spent the 3 days with the Division of Operations. One experienced daily routines of field and crafts employees while another team traveled with supervisors. All four teams had a beginning session with Vivian Kirkpatrick, BARC Administrative Officer, on BARC special programs for students, and a final wrap-up session with James L. Hilton, Chairman, Agricultural Environmental Quality Institute, who coordinated the program. Participants were enthusiastic in expressing their appreciation for the warm hospitality and individual attention which contributed to the success of this program. One result is a current negotiation to provide special students with work training in grounds maintenance under teacher supervision in cooperation with the Division of Operations. A special thanks to all employees who participated in this program!

HONORS AND AWARDS

Cash Awards:

Brauning, Albert C., Maintenance and Construction Branch, Division of Operations.
Ferensic, Marie M., Chemicals Coordination Unit, AEQI.

Thomas E. Devine, Research Geneticist, Cell Culture and Nitrogen Fixation Laboratory, PPHI, received the Research Award of the Northeastern Branch of the American Society of Agronomy at the Society's annual banquet at Orono, Maine, July 13. Dr. Devine was cited for conducting productive and exceptionally creative research in several challenging and broadly diverse areas: interspecific hybridization; the allopolyploidization of induced tetraploids by means of X-ray irradiation; selection for tolerance to herbicides, air pollutants, and edaphic stresses; the development of disease and insect resistance germplasm; and the genetic improvement of nitrogen fixation and yield in soybeans.

Elton W. Herbert, Jr., Research Entomologist, Bioenvironmental Bee Laboratory, PPI, will be honored twice this year. Dr. Herbert was the recipient of the J. I. Hambleton Memorial Award presented each year by the Eastern Apicultural Society "To recognize and encourage outstanding research in apiculture conducted in North America." This award was presented at their annual meeting on August 7, in New Brunswick, New Jersey. In addition, Dr. Herbert will be honored as the nominee from the Eastern Branch of the Entomological Society of America for the CIBA-GEIGY Recognition Award in Entomology. He will be appropriately honored at the Eastern Branch meeting on October 6 in Syracuse, New York. Both awards are for his outstanding contributions in the study of honeybee nutrition.

EMPLOYEE ACTIVITIES

On July 23, Gilbert D. McCollum, George W. Walter, and Ernest W. Goins, Vegetable Laboratory (VL), HSI, served as judges for the Annual Vegetable Home Garden Contest at the Soldiers' and Airmen's Home, Washington, D.C. This event is currently organized by Mr. C. D. Browne, D.C. Director of Recreation, and, for over 20 years, has been coordinated by Mr. Bill Youngman, contributing garden editor to the Washington Star. The VL has participated in this event since its inception. Sixty gardens (15 by 20 feet) were entered in the competition. Vegetable diversity, cultural and nutritional practices, pest control, and product quality were major judging criteria. Increased number of garden entries in the contest and quality of gardening among the contestants were pleasing to the judges.

* * * * *

VISITORS

Belgium--Dr. F. Benoit, Head, Research and Development, Proefstation voor de Groenteteelt, St. Katelijne Waver, visited the Vegetable Laboratory on July 7 to discuss ongoing research in potatoes, tomatoes, cole crops, asparagus, etc. Raymon E. Webb, Vegetable Laboratory Chief, Peter B. Adams, Soilborne Diseases Laboratory, and Miklos Faust, Fruit Laboratory Chief reviewed their respective research programs with Dr. Benoit.

India--Dr. B. B. Nagaich, Director, Central Potato Research Institute, Simla, and Research Coordinator for the 14 potato experiment stations located in the diverse ecological zones of the subcontinent, visited the Vegetable Laboratory's potato project July 21-22. Dr. Nagaich was interested in potato research activities and exchange of a diversity of germplasm, breeding stocks, and segregating tuber progenies. Robert W. Goth, Lind L. Sanford, William W. Cantelo, and Raymon E. Webb discussed their specific research activities with Dr. Nagaich. Dr. Nagaich visited briefly with Paul A. Putnam, Director; Essex E. Finney, Jr. and Jerrel D. Powell, Assistant Directors; A. A. Piringer, Chairman, HSI; Anson E. Thompson, NPS; George A. White, Germplasm Resources Laboratory, PGGI; and Theodor O. Diener, Plant Virology Laboratory, PPI.

Norway--Mr. Anders Haugum, Sundnes Brenneri (potato processing), Sakshaug, visited the Vegetable Laboratory on May 28. Robert W. Goth discussed the various potato research activities in the Laboratory with Mr. Haugum--particularly as they relate to improved potato processing capability.

People's Republic of China--Mr. Li Peng-fei, Horticulturist, and Dr. Faan Hwei-Chung, Plant Virologist, South China Agricultural College, Canton, and Dr. David R. MacKenzie, Pennsylvania State University, University Park, visited the Vegetable Laboratory, HSI, on July 24. Thomas A. Barksdale, William W. Cantelo, Robert W. Goth, Gilbert D. McCollum, Lind L. Sanford, and Raymon E. Webb reviewed their research activities and discussed the potential for exchange of materials and research information.

SURPLUS EQUIPMENT

Item	Condition	Contact	Telephone
Metal Containers (Approx. 6 by 15 cm)	Good	Louis Bass*	FTS 323-5205
Massey-Ferguson 33 Grain Drill (1976)	Good	G. Shaffer	X42080
International Harvester Seed/ Fertilizer Distributor (1965)	Good	G. Shaffer	X42080

*Director, National Seed Storage Laboratory (NSSL), Fort Collins, Colorado. The NSSL is converting from metal containers to the less-space-consuming flat paper containers for seed storage. There are 75,000+ containers available. They have quarter-turn screw-top metal lids.

for P. A. PUTNAM, Director
Beltsville Agricultural Research Center

United States Department of Agriculture
Science and Education Administration
Agricultural Research Northeastern Region Beltsville Agricultural Research Center
Beltsville Maryland 20705

NOTES FROM THE DIRECTOR

No. 127

September 24, 1981

H. H. KEIFER ERIOPHYID MITE COLLECTION

The most comprehensive eriophyid mite collection in the world has been donated to the Systematic Entomology Laboratory (SEL), IIBIII, by H. H. Keifer, California Department of Agriculture (retired). This collection of more than 10,000 slides includes over 600 type (voucher) specimens. Accompanying these slides is dried plant material with mites on which the collection is based, and the 600 plus original illustrations made by Keifer during his 40 years of research on important plant feeding mites.

The eriophyid mites are minute, probably averaging about 1/200 of an inch long. They are known as gall mites, bud mites, erineum mites or eriophyid mites, and can cause serious damage to plants by their feeding. This feeding may cause bronzing or even extensive distortion of leaves, buds, flowers, or fruit, and galls or erineum (fuzzy patches) on leaves. Some of the mites are vectors of plant virus affecting such crops as currants, figs, peaches, plums, as well as wheat and other grasses.

This collection and associated illustrations will be an extremely valuable addition to the mite research programs of SEL taxonomists E. W. Baker and R. L. Smiley.

PERSONNEL

William J. VanDerWoude will assume the duties of Chief, Light and Plant Growth Laboratory (LPGL), PPHI, on October 4. Dr. VanDerWoude is a native of Indiana where his graduate studies at Purdue University were completed in 1972. He then taught and continued research activities in plant membrane biology at the University of California/Riverside. In 1977, he joined the USDA as Plant Physiologist in the Seed Research Laboratory, PGGI. His studies there of light and temperature control of germination will be continued in his new position and expanded to include other aspects of plant development. Dr. VanDerWoude and the four most recently employed members of the laboratory average 35 years in age, which makes the LPGL one of the youngest staffed laboratories at BARC.

H. Ray Gamble has joined the Nonruminant Parasitic Diseases Laboratory, API, as a Research Associate through a Specific Cooperative Agreement with the Department of Zoology, University of Maryland. Dr. Gamble received his Ph. D. at Ohio State University in parasite biochemistry. Most recently, Dr. Gamble has been engaged in postdoctoral research at the University of Massachusetts. This research concerned immunochemistry of trypanosome antigens. Dr. Gamble will conduct research on the immunochemical characterization and production of functional antigens of Trichinella spiralis, using genetic engineering techniques.

PAY REMINDER

Employees who were promoted from Federal Wage System to General Schedule positions within the past 6 years may be entitled to some backpay.

The U.S. Court of Claims rendered an opinion on May 16, 1979, in Clark vs. United States that Federal Wage System employees promoted to General Schedule positions were entitled to the two-step promotion benefit in setting their pay in the General Schedule position. This is a marked change in standard pay setting procedure; and, therefore, would result in backpay for such employees.

If you have been promoted from a Federal Wage System to General Schedule position during the past 6 years, you must submit a claim to the U.S. General Accounting Office (GAO), Claims Division, Washington, D.C. 20548. Claims should reference to above court case and FPM Bulletin #531-107. A copy of any claim submitted to GAO must be sent to AOD, Personnel Branch, BARC-West, Building 003, Room 104.

Any questions concerning the court decision or claims procedures should be directed to your servicing Personnel Team. It should be pointed out that the Court of Claims decision has been appealed to the Supreme Court. Should the Supreme Court reverse the lower court decision, there would be no entitlement to backpay for former Wage System employees promoted to General Schedule positions.

ANIMAL PARASITOLOGY INSTITUTE (API) HIGHLIGHTS

Michael D. Ruff and Ron Fayer reviewed research needs and priorities in veterinary parasitology at the American Association of Veterinary Parasitologists meeting in St. Louis, Missouri, July 19-20. Dr. Ruff was elected program chairman for the 1982 meeting of the American Association of Veterinary Parasitologists to be held in Salt Lake City, Utah.

Robert S. Rew was invited to speak at Syntex Research, Palo Alto, California, on May 6, and Lilly Research Laboratories, Greenfield, Indiana, July 17, on the topic "Parasitic Helminth Biochemistry and its Relationship to Drug Action."

K. Darwin Murrell was an invited speaker for the President's Symposium at the Annual Meeting of the American Society of Parasitologists, held in Montreal, Canada, August 11-14. The theme of the Symposium was "Immunopathology of Parasitic Infections." Dr. Murrell's talk was entitled "Immunopathology of Fluke Infections, Especially Schistosomes." He also gave an invited seminar on "Porcine Strongyloidiasis" at the Louisiana State University School of Veterinary Medicine, Baton Rouge, September 21.

Harry D. Danforth presented the results of his studies on "Hybridomas Which Produce Monoclonal Antibodies Against Coccidiosis" at the 17th Annual Coccidiosis Conference, which was held in August in Montreal, Canada.

ANIMAL PARASITOLOGY INSTITUTE (API) HIGHLIGHTS (Cont'd.)

Michael D. Ruff spoke on "An Update on Coccidiosis Control" at the 1981 Poultry Servicemen's Conference, held recently at Salisbury, Maryland.

Patricia C. Augustine was invited to become a member of the Turkey Health Committee, National Turkey Federation.

Michael D. Ruff has been invited to become a member of the Editorial Board of Avian Diseases. He has also been elected to the Nominating Committee of the American Society of Parasitologists, and appointed Chairman of the Committee on Drugs and Chemicals, Poultry Science Association.

HONORS AND AWARDS

Cash Awards:

Brocht, Donna M., Nonruminant Animal Nutrition Laboratory, ASI.
Getz, Melvin E., Analytical Chemistry Laboratory, AEQI.
Lefcourt, Alan M., Milk Secretion and Mastitis Laboratory, ASI.
Marsh, Paul B., Biological Waste Management and Organic Resources Laboratory, AEQI.
Thieman, Raymond O., Poultry Unit, Animal Operations.

Quality Increases:

Bemis, Robert K., Engineering and Planning Branch, Division of Operations.
Ducellier, Judith L., Economic Botany Laboratory, PGGI.
Hood, Martha W., Chairman's Office, API.
Welker, Louis S., Engineering and Planning Branch, Division of Operations.
Yates, Gail C., Plant Virology Laboratory, PPI.

Robert F. Whitcomb, Insect Pathology Laboratory, PPI, recently was notified that a manuscript prepared with Robert E. Davis, Plant Virology Laboratory, PPI, has been selected as a Citation Classic by the Institute of Scientific Information, publisher of Current Contents. The manuscript by Drs. Whitcomb and Davis appeared in Annu. Rev. Entomol. 15:405, 1970, and dealt with a wide array of viruses and prokaryotes in plants and insects. This publication has been identified as one of the most cited in its field. This is a significant compliment and illustrates the leadership position of these BARC scientists in their area of research.

Henry A. Affledt, Jr., University of Maryland Agricultural Engineering Senior and part-time employee of the Agricultural Equipment Laboratory, PPHI, has received the 1981 John G. Sutton Memorial Award of the American Society of Agricultural Engineers (ASAE). John Sutton was a USDA Soil Conservation Service Engineer. The award is given annually to the outstanding Agricultural Engineering student in the United States and includes a plaque, $100 cash, and a $125 travel allowance to attend a National ASAE meeting.

YOUNG ADULT CONSERVATION CORPS (YACC)

The YACC has enrolled 27 additional participants since August 21, 1981. Of those 27, 23 are new hires and 4 are reinstatements. Below is a statistical breakdown:

New Enrollment:

Black Male	Black Female	White Male	White Female
9	15	0	3

Total Enrollment Statistics:

89% minority 60% female

Since August 3, 1981, seven YACC enrollees have accepted the following temporary positions:

Location	Duties
API	Clerical
An.Op.	Care and feeding of animals
HSI	Greenhouse and fieldwork
ARS/Hyattsville	Clerical

COOPERATIVE RESEARCH

During this past summer, Dr. E. L. Paz, a faculty member of the University of the District of Columbia (UDC), spent a sabbatical working with Norman J. Stern, Meat Science Research Laboratory (MSRL), ASI. These two scientists combined their knowledge and experiences in food science and microbiology to make some important observations in the forefront of food microbiology. Their progress on an important project regarding Campylobacter was especially encouraging. The contributions of Dr. Paz to various phases of research within the MSRL are gratefully acknowledged. We look forward to continuation of this valuable cooperative effort between the UDC and the USDA.

A recent letter to Richard H. Foote, Systematic Entomology Laboratory, IIBIII, from Doyle Conner, Commissioner, The State of Florida Department of Agriculture, reads, in part:

> "On behalf of the Florida Department of Agriculture and the agricultural industries, I want to express sincere appreciation to you for all that you have done to assist us in our efforts to bring the Mediterranean fruit fly under control.
>
> "As you well know, within a week from the time of discovery of the flies in Florida, our control program was put into effect. I am confident that because of this quick response we will soon be in a position where we can say that this dangerous plant pest has been completely eradicated from our State.

COOPERATIVE RESEARCH (Cont'd.)

"We want to particularly thank you for your extra efforts in confirming these fruit flies, coming to your office at odd hours, and handling numerous telephone calls. Your assistance to our entomologists in Gainesville is greatly appreciated, and has been responsible in no little way for our getting the upper hand on this pest, and then enabling us to get on with the job that needed to be done.

"I know that all of Florida agriculture is grateful and joins me in giving you this "pat on the back" for a job well done...."

ARS (BARC) VARIETY RELEASES

Date	Commodity	Description
7/21/80	Sugarbeet	Male-sterile monogerm line SP 80320-02 and its O-type pollen fertile maintainer line SP 80320-0. Jointly with Beet Sugar Development Foundation, Ft. Collins, Colorado. (G. E. Coe)
8/11/80	Barley	Composite Cross XXXVII-A, B, and C barley germplasm resistant to leaf rust, powdery mildew, and scald. (P. S. Baenziger)
8/14/80	Peach	SENTRY is being introduced because of its productiveness, large fruit size, and early season of maturity. (H. W. Fogle)
10/16/80	Potato	RUSSETTE, a new russet skin potato. Jointly with Florida and New Jersey. (R. E. Webb)
1/17/81	Tomato	US68 Tomato hybrid adapted to Eastern and Midwestern United States, resistant to Fusarium and Verticillium. (A. K. Stoner)
3/12/81	Lima Bean	MRF 79, a Fordhook-type lima bean breeding line with green cotyledons and resistance to races A, B, C, and D of downy mildew. (C. A. Thomas)
4/22/81	Forage	W10 multiple pest resistant alfalfa germplasm. Jointly with Washington. (J. H. Elgin)
5/19/81	Strawberry	ALLSTAR, a late-midseason, disease-resistant June-bearing strawberry cultivar. Jointly with University of Maryland. (A. D. Draper)
5/19/81	Strawberry	TRIBUTE and TRISTAR, two new everbearing strawberry cultivars. Jointly with University of Maryland. (D. H. Scott (retired), A. D. Draper, and G. J. Galletta)

ARS (BARC) VARIETY RELEASES (Cont'd.)

Date	Commodity	Description
6/3/81	Blackberry	HULL THORNLESS, a new thornless blackberry. Jointly with Ohio and Illinois. (G. J. Galletta)
6/25/81	Tobacco	Maryland Tobacco Variety MD 341, highly resistant to tobacco mosaic, wildfire, and Fusarium wilt disease. Jointly with Maryland. (H. A. Skoog)

VISITORS

On September 2, a delegation from the Directorate-General for Agriculture, Commission of the European Communities, visited BARC and were given an overview by John Fleming. The overview stressed the Animal Science Institute and the Animal Parasitology Institute. Members of the delegation also conferred with H. Graham Purchase and Daryl D. King, Livestock and Veterinary Sciences, NPS. Members of the delegation were: (Belgium) Hector DeBaer, Principal Administrator, Division of Milk Products; (Denmark) Frits Qvist, Principal Administrator, Division of Animal Feed, Pigmeat, and Poultry; (Federal Republic of Germany) Hartwig Schirmer, Official, Division of Beef, Veal, and Sheepmeat; and (Vietnam) Jean-Jacque Bouflet, Administrator, Division of Legislation Relating to Veterinary Matters and Zootechnics.

Australia--Dr. D. J. Walker, Officer-in-Charge of the Meat Research Laboratory, CSIRO, Queensland, recently visited with Bradford Berry and other scientists of the Meat Science Research Laboratory, ASI, to discuss research in electrical stimulation of carcasses, hot boning, preslaughter factors, meat quality, and byproducts.

Japan--Professor Satoshi Shinonaga, Tokyo Medical and Dental University, visited the Systematic Entomology Laboratory, IIBIII, from August 28 until September 10 to study specimens of the house fly family, the Muscidae, with Raymond J. Gagne, Research Entomologist. Dr. Shinonaga's trip was in support of his studies on filth-feeding flies of the Oriental and Pacific regions.

Japan--Professor Toshiro Nigo, College of Agriculture, Nihon University, Tokyo, visited E. H. Lee, Plant Stress Laboratory, PPHI, on August 10-20. M. N. Christiansen, Chairman, PPHI, made a recommendation to have Prof. Nigo also meet with S. Asen, Florist and Nursery Crops Laboratory, HSI; S. Reiser and K. Stewart, Beltsville Human Nutrition Research Center; K. R. Hill, Chief Analytical Chemistry Laboratory, AEQI; P. C. Kearney, Chief, Pesticide Degradation Laboratory, AEQI; and J. Saunders, Tobacco Laboratory, PGGI.

Korea--Mr. Kee Sung Kim of the Food Research Institute in Kyonggi-do, recently visited the Meat Science Research Laboratory, ASI, to discuss all phases of meat research within the Laboratory.

New Jersey--Harry D. Danforth, Poultry Parasitic Diseases Laboratory, API, was recently visited by several scientists from American Cyanamid Company, Princeton, to study his methods for the production of hybridomas.

People's Republic of China (PRC)--On August 26, a team of five agricultural administrators from PRC and the Embassy representative visited Beltsville. They first toured the Center and then spent the rest of the morning with P. A. Putnam discussing management at the Regional and Center levels. In the afternoon, they met with J. L. Hilton, Chairman, AEQI, and R. L. Steere, Chief, Plant Virology Laboratory, PPI, to discuss management procedures at the Institute and Laboratory levels. They concluded their visit with a brief follow-up discussion with P. A. Putnam. They showed considerable interest in our position resources management system and the peer evaluation committee procedures.

Poland--Dr. B. Czyrek of the Meat Board in Warsaw, recently visited the Meat Science Research Laboratory, ASI, and met with A. W. Kotula, Chief, and other scientists in the Lab to discuss all phases of meat research--with particular emphasis on shipping losses occurring in transport of livestock.

Senegal--Mr. Souleymane Diene, Governor of the Sine-Saloum Region of Senegal, was given a general tour of BARC by Michael Combs of the Visitor Unit, on August 18. BARC was one of the places in the U.S. that Mr. Diene specifically wanted to visit. Mr. Diene was sponsored by the African-American Institute.

Taiwan--A 10-man team of university professors and scientists from Taiwan visited BARC this past summer. They were interested in the application of growth regulators in the laboratory and in field studies. P. A. Putnam, Director, welcomed the group. The visitors then toured various Laboratories and Institutes. Research programs and projects were discussed by: (PPHI)--M. N. Christiansen, Chairman; E. H. Lee and W. P. Wergin, Chief, Plant Stress Lab; R. M. Robinson, Light and Plant Growth Lab; W. Meudt, J. G. Buta, B. Mandava, R. A. Saftner, P. H. Terry, and M. Lieberman, Chief, Plant Hormone and Regulators Lab; D. E. Cress and F. A. Hammerschlag, Cell Culture and Nitrogen Fixation Lab; (HSI)--J. D. Anderson, Postharvest Physiology Lab; C. Y. Wang, Horticulture Crops Quality Lab; and M. Faust, Chief, Fruit Lab; (PGGI)--J. A. Duke, Chief, Plant Taxonomy Lab; L. Woodstock and G. R. Chandra, Chief, Seed Research Lab. The delegates appreciated their reception and the support given to them.

Venezuela--Dr. Abdul K. Bashirullah, Universidad de Oriente, Cumana, visited the Index-Catalogue of Medical and Veterinary Zoology, API, on August 25-26. He used the cumulative files to gather more information for a paper he is preparing on fish parasites.

P. A. Putnam

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

United States Department of Agriculture
Science and Education Administration
Agricultural Research Northeastern Region Beltsville Agricultural Research Center
Beltsville Maryland 20705

NOTES FROM THE DIRECTOR

No. 128 October 26, 1981

PERSONNEL

New Laboratory Chiefs:

Roger H. Lawson has been selected as Laboratory Chief for the Florist and Nursery Crops Laboratory, HSI. Dr. Lawson earned his degrees in horticulture, botany, and plant pathology at Oregon State University. Following a 1-year Fulbright postdoctoral fellowship studying plant virology in the Netherlands, he joined the Department and ARS at Beltsville in the mid-1960's as a Plant Pathologist in the laboratory now known as Florist and Nursery Crops.

Alley E. Watada has been selected as Laboratory Chief for the Horticultural Crops Quality Laboratory, HSI. Dr. Watada earned B.S. and M.S. degrees in Horticulture at Colorado State University, and his Ph. D. degree in Plant Physiology at the University of California. His early horticultural experience includes 6 years of teaching, extension, and research duties as Assistant and Associate Professor in the Horticulture Department at West Virginia State University. A decade ago, he joined the Department and ARS at Beltsville as a food technologist in the laboratory now known as Horticultural Crops Quality.

New Employees:

The Soilborne Diseases Laboratory, PPI, welcomes three new scientists on a temporary full-time basis. Dr. Yigal Henis is Professor of Microbiology at the Hebrew University of Jerusalem, Rehovot. He will be working with George C. Papavizas, Chief, and Jack A. Lewis on mechanisms of action of the beneficial antagonist Trichoderma on sclerotial plant pathogens and on the development of improved strains of biocontrol agents. Mr. Gustavo A. Frias-Trevino from the Colegio Superior de Agricultura Tropical in Cardenas, Mexico, is working on a cooperative project sponsored by O.I.C.D. Mr. Grias is working closely with Robert D. Lumsden and Jack A. Lewis, and the group is also cooperating with Dr. Roberto Garcia-Espinosa at Chapingo. Several micoorganisms antagonistic to Pythium and other soilborne plant pathogens have been isolated from Mexican soils suppressive to diseases and identified for possible use as biocontrol agents. Dr. Elizabeth Sutherland, a recent graduate from Michigan State University, will be working with George C. Papavizas and John H. Bowers on mycoparasites that may affect survival of oospores of Pythium and Phytophthora in soils.

Patricia L. Carlson has joined the Poultry Parasitic Diseases Laboratory, API, as a Research Associate, a position established and funded by the Administrator. Dr. Carlson received her Ph. D. at the Medical College of Virginia, Richmond, and did her graduate work on the biological function of membrane complement receptors. Dr. Carlson will conduct research on the immunochemical characterization of monoclonal antibodies produced against avian coccidia.

YOUNG ADULT CONSERVATION CORPS (YACC)

Effective October 1, 1981, the YACC Camp located at the National Arboretum in Washington, D.C., has merged with the YACC Camp located here at the BARC. Belinda J. Brown has taken over the duties as Camp Director, and Lynn Batdorf will remain the Assistant Camp Director at the Arboretum. The merger has developed one Camp, No. 3993, with worksite locations at BARC and the National Arboretum. The worksites will continue their daily operations in much the same manner as before October 1, 1981.

The scheduled phaseout of the YACC program is still June 30, 1982. At that time, the Camp will cease its operations and all enrollees will be removed from the payroll.

HONORS AND AWARDS

Cash Awards:

Beall, Clarence V., Beef/Sheep Unit, Animal Operations.
Borkovec, Alexej B., Insect Reproduction Laboratory, AEQI.
Jacobson, Martin, Biologically Active Natural Products Laboratory, AEQI.
Kearney, Philip C., Pesticide Degradation Laboratory, AEQI.
Klingman, Dayton L., Weed Science Laboratory, AEQI.
Mullinix, Thomas E., Jr., Beef/Sheep Unit, Animal Operations.
Murrell, Kenneth D., Nonruminant Parasitic Diseases Laboratory, API.
Neal, Lonnie H., Poultry Unit, Animal Operations.
Parr, James F., Jr., Biological Waste Management and Organic Resources Laboratory, AEQI.
Parsons, Delbert L., Swine Unit, Animal Operations.
Plimmer, Jack R., Organic Chemical Synthesis Laboratory, AEQI.
Puttock, Mary E., Engineering & Planning Branch, Division of Operations.
Taylor, Alan W., Soil Nitrogen and Environmental Chemistry Laboratory, AEQI.
Thieman, Raymond O., Poultry Unit, Animal Operations.

Dora K. Hayes, Chief, Livestock Insects Laboratory, AEQI, has been elected to a 6-year term as a member of the Board of Directors of the International Society of Chronobiology.

BARC COMMITTEE CHANGES

Harry D. Danforth, Poultry Parasitic Diseases Laboratory, API, replaces Kenneth D. Murrell, Nonruminant Parasitic Diseases Laboratory, API, as the API representative on the BARC Biosafety Committee.

Alan A. Atchley, Economic Botany Laboratory, PGGI, replaces William VanDerWoude as the PGGI representative on the BARC Safety Committee.

VISITORS

France--Dr. N. Hawlitzky, Institut Nationale de la Recherche Agronomique, Versailles, visited Jack R. Coulson and Akey C. F. Hung, Beneficial Insect Introduction Laboratory, IIBIII, on September 15-16, to discuss all phases of biological control using Trichogramma in the U.S. She also visited John L. Drea and W. Klassen, Crop Sciences, NPS, and James A. Svoboda, Insect Physiology Laboratory, PPI.

France--A group of approximately 25 veterinarians and immunologists--traveling under the auspices of Merck and Company, Inc.--recently visited the Animal Parasitology Institute. Research programs within the Institute were discussed by Harry Herlich, Michael D. Ruff, Kenneth D. Murrell, Robert S. Rew, and J. Ralph Lichtenfels.

People's Republic of China--Four agricultural scientists and their interpretor visited BARC on September 22 and were greeted by Essex E. Finney, Jr., Assistant Director. The group leader is Director of the Division of Cash Crops, Department of Agriculture, Shandong Province. Members of the group included the Deputy Director, Peanut Research Institute; Associate Professor, Department of Agriculture, Shandong Agricultural College; and an agronomist with the Bureau of Agriculture, Peng Lai County Extension Office. The interpretor was from the Foreign Affairs Office, Shandong Province. Their main interest was in peanut production. Following their visit in the Director's Office they were given a short tour of the Center by John F. Fleming, Head of the Visitor Unit, and then met with Robert C. Leffel, Crops Sciences Staff, NPS, and Robert K. Howell, Plant Stress Laboratory, PPHI, who has research underway on nitrogen fixation in peanuts.

United Arab Republic of Egypt--Dr. Aly Serri, Deputy Director for Agricultural Research, Ministry of Agriculture, Cairo, and Dr. Bishr, Research Station Director, visited BARC on October 13. They were accompanied by Neil A. Patrick, Project Coordinator for Egypt Cereals Improvement, Consortium for International Development, Las Cruces, New Mexico. Following the greeting by Essex E. Finney, Jr., Assistant Director, the visitors were accompanied on a tour of the Center by John Fleming, Head of the Visitor Unit. The visitors are on a 2-week tour of major cereal grain research and production areas in the United States.

VISITOR UNIT QUARTERLY TABULATION

During the quarter ending September 30, 1981, the Visitor Unit reports the following information:

No. of Visitors	High Level/Professional Group/Individuals	Students	Other	Countries Represented
3,000	785	483	1,732	55

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

United States Department of Agriculture
Science and Education Administration
Agricultural Research Northeastern Region Beltsville Agricultural Research Center
Beltsville Maryland 20705

NOTES FROM THE DIRECTOR

No. 129

November 30, 1981

STRONG INTEREST IN SMALL FARMS

> *...It is not too soon to provide by every possible means that as few as possible shall be without a little portion of land. The small landholders are the most precious part of the State.*
>
> Thomas Jefferson, 1785

Over 600 people attended a special symposium at Beltsville on November 15-18, dealing with small family-operated farms. Speakers described recent research results and identified problems needing additional attention in the production and marketing of vegetables, fruits, berries, forage, and livestock. Symposium registrants represented every region of the country, and a wide diversity of backgrounds, including research, extension, teaching, producers, industry, international organizations, consultants, etc. Over 25 percent of the attendees were farmers.

A highlight of the symposium was the banquet on Tuesday evening. William C. Norris, chairman and chief executive officer of Control Data Corporation, was the guest speaker. He emphasized the potential for small family farms, and described a computer-based system for providing information to help small farmers improve their management capabilities. Management along with mechanization and marketing are three of the major concerns confronting small farmers.

President Reagan sent a letter to those at the banquet commending the Department and Secretary for taking the initiative to organize "...this important conference for sharing of research and information useful to the strengthening of the small farm in America...."

Bud Kerr, NER Coordinator, Small Farms Research, and Lloyd Knutson, Chairman, IIBIII, are to be complimented for organizing and directing this successful program. I am pleased with the cooperation provided by all who contributed.

REMARKS BY DR. TERRY B. KINNEY, JR.

These are excerpts from some remarks made by Dr. Kinney, Acting Administrator, ARS, at the October Senior Staff Conference (SSC):

"We need to make good decisions faster than we normally do in today's climate. We have to anticipate more things. We have to make decisions in advance in case the question comes up. We will do that, I don't hesitate once I have what I think is a significant amount of information to make a decision; the Regional Administrators don't, the Chiefs don't. And, we need to do that. If it is wrong, change it. If you have trouble changing your mind and saying 'I was wrong, we need to make a different decision' then you should not be a manager."

* * * *

"The Distinguished Scientist/ARS Managers Long-Range Planning Seminar--at the last ASC meeting we approved the process that will result in a workshop format where a small group of scientists and some top ARS managers or administrators will discuss where ARS should be guiding some of its efforts. To date, over 50 scientists have been asked, and most have enthusiastically responded, to identify the top three problems in their area of expertise and the top three recent, or about to occur, major breakthroughs which need additional research in order to be exploited. We are talking about our supergrade scientists; we have never utilized the supergrade scientist in terms of counsel and advice to the extent that we should, and yet we have recognized them as being extraordinary. So, we will have a workshop type meeting early in the calendar year (January or February) where we will have papers presented by these people who are selected to participate and, hopefully, this seminar or workshop can be designed so the end product will be an outline for a new revised NRP. And, if successful, then we can select out of the topics to follow up on in subsequent years."

BARC RESEARCH SPINOFF

The Insect Reproduction Laboratory, AEQI, reports a classical example of research spinoff. In the late 1960's, A. B. Borkovec and C. W. Woods developed a highly effective insect chemosterilant, bisazir, which was used with considerable success in field tests for controlling mosquitoes, boll weevils, and other insects. Some 10 years ago, they sent samples of bisazir to scientists of the U.S. Fish and Wildlife Service in Michigan, who were searching for new procedures for controlling the sea lamprey, a destructive parasite of fish in the Great Lakes. Recently concluded field tests in Michigan showed that bisazir effectively sterilized male lampreys and that the sterile males could be used for control and possible eradication of this parasite in the Great Lakes. P. H. Terry, now a member of the Plant Hormone and Regulators Laboratory, PPHI, also cooperated with the Fish and Wildlife Service on this project.

PERSONNEL

J. R. (Bob) Tomerlin has joined the Field Crops Laboratory, PGGI, as a research plant pathologist. Dr. Tomerlin received his Ph. D. degree at Kansas State University. While there he was associated with the USDA Cereal Rust Project. He has been employed as a postdoctoral research associate at Michigan State University this past year, working on their integrated pest management project on apple scab. Dr. Tomerlin will conduct research on the development of methods for reducing losses from diseases on barley and wheat in the Eastern United States.

Kenneth C. Gross, plant physiologist, has joined the Horticultural Crops Quality Laboratory, HSI. Dr. Gross, a native of Pennsylvania, received his B.S. and M.S. degrees at Pennsylvania State University and his Ph. D. degree

at North Carolina State University. Dr. Gross will conduct research on carbohydrate metabolism and catabolism, and hydrolyzing enzymes of harvested fruits and vegetables.

Sara L. Reynolds has joined the Applied Plant Pathology Laboratory, PPI, as a research associate to work with Rodrigo G. Orellana on the effects of viruses and other pathogens on nitrogen fixation in soybeans. Ms. Reynolds obtained her M.S. degree at the University of Maryland, under the leadership of Professor M. K. Corbett.

Visiting Scientist:

Dr. Kazunori Abe, Professor of Biochemistry and Nutrition at the Seinan Jogakuin Junior College, Kitaktyshu, Japan, is working with Robert M. Faust in the Insect Pathology Laboratory, PPI. They are investigating genetic mechanisms controlling toxicity of entomopathogenic bacteria, and on the development of improved strains of insect pathogens. Dr. Abe's 1-year stay is being funded by the Seinan Jogakuin Foundation and the Japanese government.

HONORS AND AWARDS

Cash Awards:

Hawkins, Nelson R., Maintenance and Construction Branch, Division of Operations.
Powers, Everett K., Granary Unit, Animal Operations.
Ruff, Michael D., Poultry Parasitic Diseases Laboratory, API.
Wells, Leroy R., Swine Unit, Animal Operations.
Woods, Wallace C., Granary Unit, Animal Operations.

Quality Increases:

Clark, Herbert D., Plant Hormone and Regulators Laboratory, PPHI.
Hale, Marilyn H., Plant Virology Laboratory, PPI.

The American Registry of Professional Entomologists of the Entomological Society of America has announced its awards for Outstanding Entomologists for 1981. The awards are given in six subject matter categories representing the major interests and occupations of the Nation's entomologists. This year's award for Outstanding Entomologist in Category VI, General Entomology, was made to Richard H. Foote, Systematic Entomology Laboratory, IIBIII.

BARC COMMITTEE CHANGES

Herbert W. Haines, Ruminant Parasitic Diseases Laboratory, replaces Laura M. Franklin as API representative on the BARC EEO Committee.

EMPLOYEE ACTIVITIES

Harry Herlich, API Chairman, has been appointed as the American Society of Parasitologists' representative to the American Association for the Advancement of Science for 1982.

Ronald Fayer, Chief, Ruminant Parasitic Diseases Laboratory, API, has been appointed to the Endowment Fund Committee for the American Society of Parasitologists. He has also been nominated to the Board of Trustees for the American Type Culture Collection by the American Society of Parasitology.

Raymon E. Webb, Chief, Vegetable Laboratory, HSI, was invited to present a discussion entitled "Advances in potato chip variety research," at the Chip and Snack Foods Seminar, sponsored by the National Potato Council, held in Syracuse, New York, in October.

VISITORS

Secretary Block Visits BARC:

On November 9, Secretary Block was greeted by P. A. Putnam, followed by brief visits with Howard W. Kerr, Jr. (small farms program); Harold Hawk and Vernon Pursel (animal reproduction); Thomas Devine (nitrogen fixation); Raymon Webb (potato breeding); Ron Fayer (trichina in swine); Miklos Faust and Richard Zimmerman (tissue culture with fruit) Lloyd Knutson (computerization of taxonomic insect collections); and Allan Stoner and David H. Smith (World Small Grain Collection). After these visits, Secretary Block addressed employees in the auditorium by invitation of OPEDA (Al Fusonie and Dora Hayes).

England--Dr. J. F. Michel, chief parasitologist, Ministry of Agriculture, Weybridge, England, recently visited the Animal Parasitology Institute. He discussed cattle parasites and their control and the problems of drug resistance with Harry Herlich, Robert S. Rew, and Raymond H. Fetterer. Dr. Herlich accompanied Dr. Michel to Griffin, Georgia, where the visitor participated in a workshop on "Bovine Ostertagiasis" at the Georgia Experiment Station.

Netherlands--Professor Dhort, special technical consultant, and Dr. Van Dixhoorn, designated authority for the Netherlands Organization for Economic Cooperation and Development (OECD) seed schemes, visited BARC on October 15 and 16 to discuss U.S. designated authority with Jerrel B. Powell, Assistant Director, BARC, and some operational details of international shipment of certified seed with Florence M. Cox, administrative assistant, Seed Research Laboratory, PGGI. The visit to BARC was the culmination of 2 weeks in the U.S. visiting State Foundation Seed Stocks Organizations.

Netherlands--Dr. P. Woldendorp, director of research and development, and Dr. K. G. de Noord, assistant director, AVEBE Corporation, Veendam, the world's largest potato starch manufacturer, visited Raymon E. Webb, Chief, Vegetable Laboratory, HSI, on November 3. They discussed variety development with emphasis on high starch and protein contents and related researches.

Netherlands--On November 10, Dr. Hans J. Bos, Intervet International B.V., Boxmeer, while visiting the Animal Parasitology Institute to study the cultivation and immunity of parasites with Frank W. Douvres, gave a seminar on "Entamoeba histolytica: An Elusive Pathogen."

P. A. PUTNAM, Director
Beltsville Agricultural Research Center

United States Department of Agriculture
Science and Education Administration
Agricultural Research Northeastern Region Beltsville Agricultural Research Center
Beltsville Maryland 20705

NOTES FROM THE DIRECTOR

No. 130

December 23, 1981

NEW LABORATORY CHIEF

Norman C. Steele assumed the duties of Chief, Nonruminant Animal Nutrition Laboratory, ASI, on December 14. Dr. Steele is a native of Maryland. Undergraduate and graduate training was acquired from the University of Maryland between 1964 and 1973. In 1969, Dr. Steele joined the Animal Science Research Division, ARS, as an animal husbandman. His research is on the manipulation of lipogenesis to improve fetal development and postpartum survival in swine, and development of receptor techniques for studying biologically active substances involved in growth and development processes of monogastrics.

COMBINED FEDERAL CAMPAIGN

Congratulations are in order to the Horticultural Science Institute, Insect Identification and Beneficial Insect Introduction Institute, and those in the BARC Director's Office who greatly exceeded their contribution goals, and to the Animal Science Institute which met its goal. BARC's overall record was nearly 85 percent of the monetary goal but only 65 percent of the participatory goal. We appreciate the efforts of all who participated in the Combined Federal Campaign.

DR. TERRY B. KINNEY, JR., PROPOSES ARS RESEARCH AWARDS

Following is an excerpt from remarks made by Dr. Kinney, Acting Administrator, ARS, at the October Senior Staff Conference (SSC):

"One other thing we need to do now that we have some situations occurring that we don't like, very often the tendency is to say 'let's hold up' on some things. One thing we have held up on too long over the past few years has been the recognition, reward, and attention to our people. We cannot do that. We have a tendency to let those things slide because they take time and we don't have to do them . . . During the last ASC we developed criteria and procedures for granting ARS Research Awards, over and above the cash awards that you should be doing routinely; these are currently being reviewed at the Department level and except for some possible negotiation about the exact nature of the award we should be able to announce them shortly. I was hoping we could announce them today. We are proposing that four Regional awardees be selected using a committee review process, one of the Regional winners will be identified as the ARS awardee. We are proposing that each awardee will receive cash, a plaque, and some type of program support that is appropriate for that individual. This is scheduled so we can present this award next year during SSC. This is a positive step; we are not talking about a $2,500 cash award; we are talking about a substantial award to our outstanding scientists. We have never done that, and we should have been doing it years ago."

EMPLOYEE ACTIVITIES

K. Darwin Murrell, Chief, Nonruminant Parasitic Diseases Laboratory, API, was invited to speak at the November 19 meeting of the Livestock Conservation Institute which was held in Chicago. Dr. Murrell spoke on "Current ARS Research on Trichinosis."

PERSONNEL

Herman E. A. Kwansa has joined the Nonruminant Parasitic Diseases Laboratory, API, through an International Atomic Energy Agency Fellowship. Mr. Kwansa will be on leave from the Ghana Atomic Energy Commission during the year he will be at BARC. Mr. Kwansa will be working with K. Darwin Murrell and Ray Gamble, carrying out research on the production of monoclonal antibodies to parasite antigens using hybridoma techniques and on the radioattenuation of parasites for vaccine development.

Visiting Scientists:

Professor Peter B. Kaufman and Dr. P. Dayanandan, University of Michigan, spent November 16-18 working on Brassinosteroid-related projects with Werner J. Meudt, Plant Hormone Laboratory, PPHI.

Dr. Pang Xiong-fei, Professor of Entomology, South China Agricultural College in Guangzhou (Canton), People's Republic of China (PRC), recently began working with Akey C. F. Hung in the Beneficial Insect Introduction Laboratory, IIBIII. They are investigating the biosystematics of Trichogramma and the application of this parasitic wasp in biological control of insect pests. Dr. Pang will also study the systematics of predatory beetles (Coccinellidae) with Robert D. Gordon of the Systematic Entomology Laboratory, IIBIII. Dr. Pang's 1-year visit is being funded by the government of PRC.

Dr. Prem S. Dubey, Vikram University, Ujjain, is on a 6-month study program in the Pesticide Degradation Laboratory, AEQI, working with Allan R. Isensee. Dr. Dubey's program is funded by the Council for International Exchange of Scholars (Fulbright Program). He will be determining the environmental fate of selected herbicides using aquatic model ecosystems.

YOUNG ADULT CONSERVATION CORPS (YACC)

Ms. Belinda Brown, former YACC Camp Director, has accepted a new position with the Prince George's County Public School System. Ms. Judy McNair has been reassigned to the position as Camp Director. On behalf of the YACC Program, we all wish Belinda good luck in her future endeavors, and we welcome Judy to her new duties in the BARC Administrative Office. Judy is located in Room 215, Building 003, BARC-West, 344-3347.

HONORS AND AWARDS

Cash Awards:

Finney, Essex E., Jr., BARC Director's Office.
Grove, James H., Animal Improvement Programs Laboratory, ASI.
Hilton, James L., Agricultural Environmental Quality Institute.
Whitehead, John A., Nonruminant Animal Nutrition Laboratory, ASI.

Quality Increases:

Kruzic, Leoma J., Hydrology Laboratory, PPHI.
Morrissette, Jeanne R., Hydrology Laboratory, PPHI.
Tuthill, Kenneth L., Plant Stress Laboratory, PPHI.

VISITORS

Canada--Dr. C. E. Park, Microbiology Research Division of the Canadian Health and Welfare Department, visited the Meat Science Research Laboratory, ASI, on October 19. Dr. Park met with Norman Stern and Anthony W. Kotula to discuss research progress on the foodborne pathogen Campylobacter, and to consider new approaches in dealing with the organism.

Costa Rica--Dr. Ludvig Muller of Turrialba, visited James P. San Antonio, Vegetable Laboratory, HSI, on November 20, to consult on mushroom research.

Japan--Dr. Man-emon Takahashi, President of Hokkaido Musashi Women's Junior College and Dr. Noboru Mochizuki, Laboratory Chief and Geneticist, National Grassland Research Institute, Japan, recently visited BARC. They were interested in learning the most recent information on cell culture of cereal grains by their visit with Gideon W. Schaeffer, Chief, Cell Culture and Nitrogen Fixation Laboratory, PPHI, fruit trees by their visit with Richard H. Zimmerman, Fruit Laboratory, HSI, and to be informed about the USDA Small Grain Collection by David H. Smith, Germplasm Resources Laboratory, PGGI. They spent several hours visiting with each scientist.

Maryland--The mycology class of Loyola College, Baltimore, visited James P. San Antonio, Vegetable Laboratory, HSI, on November 19, and toured the mushroom research facility.

# # # # #

I want to take this opportunity to express my appreciation to all of the employees at BARC for their fine efforts and accomplishments during 1981, and wish each and every one of you the very best in 1982!

P. A. PUTNAM
Director, BARC